

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 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): April 26, 2019

PDF SOLUTIONS, INC.

(Exact name of registrant as specified in its charter)

000-31311

(Commission File Number)

Delaware

(State or Other Jurisdiction of Incorporation)

25-1701361

(I.R.S. Employer Identification No.)

2858 De La Cruz Boulevard

Santa Clara, CA 95050

(Address of principal executive offices, with zip code)

(408) 280-7900

(Registrant's telephone number, including area code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 or Rule 12b-2 of the Securities Exchange Act of 1934.

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

[Table of Contents](#)

TABLE OF CONTENTS

[Item 2.02. Results of Operations and Financial Condition](#)

[Item 5.03. Amendment to Articles of Incorporation or Bylaws; Change in Fiscal Year](#)

[Item 8.01. Other Events](#)

[Item 9.01. Financial Statements and Exhibits](#)

[SIGNATURES](#)

Item 2.02. Results of Operations and Financial Condition.

On May 1, 2019, PDF Solutions (the “Company”) issued a press release regarding its financial results and certain other information related to the first fiscal quarter ended March 31, 2019. The Company also posted on the Investor Relations section of its website (www.pdf.com) a management report with regard to the quarter ended March 31, 2019. Copies of the press release and management report are attached to this report as Exhibits 99.1 and 99.2, respectively. Information on the website is not, and will not be deemed, a part of this report or incorporated into any other filings the Company makes with the Securities and Exchange Commission.

The information in this Item 2.02, including Exhibits 99.1 and 99.2, is being furnished and shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities under that Section, and shall not be deemed incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

Item 5.03. Amendments to Articles of Incorporation or Bylaws; Change in Fiscal Year.

On April 26, 2019, the Board of Directors (the “Board”) of the Company adopted and approved, effective immediately, the Amended and Restated Bylaws (the “Amended and Restated Bylaws”) of the Company to change the date at which stockholder ratification of the designation of the Court of Chancery of the State of Delaware as the exclusive forum for certain actions and proceedings involving the Company is due to the Company’s 2020 annual meeting of stockholders. If the stockholders do not ratify it at the Company’s 2020 annual meeting of stockholders, the exclusive forum provision will be thereafter of no force or effect.

The foregoing description of the Amended and Restated Bylaws is qualified in its entirety by reference to the full text of the Amended and Restated Bylaws, a copy of which is filed herewith as Exhibit 3.1, and incorporated by reference herein.

Item 8.01 Other Events

On May 1, 2019, the Company issued a press release announcing that it completed the acquisition of certain assets from StreamMosaic, Inc. A copy of the press release is attached hereto as Exhibit 99.3.

The information in this Item 8.01, including Exhibit 99.3, is being furnished and shall not be deemed “filed” for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

[Table of Contents](#)

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
3.1	Amended and Restated Bylaws of PDF Solutions, Inc. effective April 26, 2019
99.1	Press Release dated May 1, 2019, regarding financial results and certain other information related to the first fiscal quarter ended March 31, 2019.
99.2	Management Report by PDF Solutions, Inc. as of May 1, 2019.
99.3	Press Release dated May 1, 2019, announcing the acquisition of certain assets from StreamMosaic, Inc.

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.

PDF SOLUTIONS, INC.
(Registrant)

By: /s/ Christine Russell
Christine Russell
EVP, Finance, and Chief Financial Officer
(principal financial and accounting officer)

Dated: May 1, 2019

BYLAWS

OF

PDF SOLUTIONS, INC.

(As Amended and Restated Effective April 26, 2019)

BYLAWS
OF
PDF SOLUTIONS, INC.

ARTICLE I

CORPORATE OFFICES

1.1 REGISTERED OFFICE.

The address of the Corporation's registered office in the State of Delaware is 2711 Centerville Road, Suite 400, City of Wilmington, County of New Castle. The name of its registered agent at such address is Corporation Service Company.

1.2 OTHER OFFICES.

The Board of Directors may at any time establish other offices at any place or places where the Corporation is qualified to do business.

ARTICLE II

MEETINGS OF STOCKHOLDERS

2.1 PLACE OF MEETINGS.

Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the Board of Directors. In the absence of any such designation, stockholders' meetings shall be held at the registered office of the Corporation.

2.2 ANNUAL MEETING.

(a) The annual meeting of stockholders shall be held each year on a date and at a time designated by resolution of the Board of Directors. At the meeting, directors shall be elected and any other proper business may be transacted.

(b) Nominations of persons for election to the Board of Directors of the Corporation and the proposal of business to be transacted by the stockholders may be made at an annual meeting of stockholders (i) pursuant to the Corporation's notice with respect to such meeting, (ii) by or at the direction of the Board of Directors or (iii) by any stockholder of the Corporation who was a stockholder of record at the time of giving of the notice provided for in this Section 2.2, who is entitled to vote at the meeting and who has complied with the notice procedures set forth in this Section 2.2.

(c) For nominations or other business to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of paragraph (b) of this Section 2.2, the stockholder must have given timely notice thereof in writing to the secretary of the Corporation, as provided in Section 2.5, and such business must be a proper matter for stockholder action under the General Corporation Law of Delaware.

(d) Only such business shall be conducted at an annual meeting of stockholders as shall have been brought before the meeting in accordance with the procedures set forth in these Bylaws. The chairperson of the meeting shall determine whether a nomination or any business proposed to be transacted by the stockholders has been properly brought before the meeting and, if any proposed nomination or business has not been properly brought before the meeting, the chairperson shall declare that such proposed business or nomination shall not be presented for stockholder action at the meeting.

(e) For purposes of this Section 2.2, "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or a comparable national news service.

(f) Nothing in this Section 2.2 shall be deemed to affect any rights of stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the Securities Exchange Act of 1934.

2.3 SPECIAL MEETING.

(a) A special meeting of the stockholders may be called at any time by the Board of Directors, or by the Chairperson of the Board, or by the president.

(b) Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected pursuant to such notice of meeting (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the Corporation who is a stockholder of record at the time of giving of notice provided for in Section 2.5, who shall be entitled to vote at the meeting and who complies with the notice procedures set forth in Section 2.5.

2.4 NOTICE OF STOCKHOLDER'S MEETINGS; AFFIDAVIT OF NOTICE.

All notices of meetings of stockholders shall be in writing and shall be sent or otherwise given in accordance with this Section 2.4 of these Bylaws not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting (or such longer or shorter time as is required by Section 2.5 of these Bylaws, if applicable). The notice shall specify the place, date, and hour of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Written notice of any meeting of stockholders, if mailed, is given when deposited in the United States mail, postage prepaid, directed to the stockholder at his address as it appears on the records of the Corporation. An affidavit of the secretary or an assistant secretary or of the transfer agent of the Corporation that the notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

2.5 ADVANCE NOTICE OF STOCKHOLDER NOMINEES AND OTHER STOCKHOLDER PROPOSALS.

Only persons who are nominated in accordance with the procedures set forth in this Section 2.5 shall be eligible for election as directors. Nominations of persons for election to the Board of Directors of the Corporation may be made at a meeting of stockholders by or at the direction of the Board of Directors or by any stockholder of the Corporation entitled to vote for the election of directors at the meeting who complies with the notice procedures set forth in this Section 2.5. Such nominations, other than those made by or at the direction of the Board of Directors, shall be made pursuant to timely notice in writing to the secretary of the Corporation. Stockholders may bring other business before the annual meeting, provided that timely notice is provided to the secretary of the Corporation in accordance with this section, and provided further that such business is a proper matter for stockholder action under the General Corporation Law of Delaware. To be timely, a stockholder's notice shall be delivered to or mailed and received at the principal executive offices of the Corporation not less than 90 days nor more than 120 days prior to the anniversary date of the prior year's meeting; provided, however, that in the event that (i) the date of the annual meeting is more than 30 days prior to or more than 60 days after such anniversary date, and (ii) less than 60 days notice or prior public disclosure of the date of the meeting is given or made to stockholders, notice by the stockholder to be timely must be so received not later than the close of business on the 10th day following the day on which such notice of the date of the meeting was mailed or such public disclosure was made. Such stockholder's notice shall set forth (a) as to each person whom the stockholder proposes to nominate for election or re-election as a directors, (i) the name, age, business address and residence address of such person, (ii) the principal occupation or employment of such person, (iii) the class and number of shares of the Corporation which are beneficially owned by such person and (iv) any other information relating to such person that is required to be disclosed in solicitations of proxies for election of directors, or is otherwise required, in each case pursuant to Regulation 14A under the Securities Exchange Act of 1934 (including, without limitation, such person's written consent to being name in the proxy statement as a nominee and to serving as a director if elected); (b) as to any other business that the stockholder proposes to bring before the meeting, a brief description of such business, the reasons for conducting such business at the meeting and any material interest in such business of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made; and (c) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the proposal is made (i) the name and address of the stockholder, as they appear on the Corporation's books, and of such beneficial owner and (ii) the class and number of shares of the Corporation which are owned of record by such stockholder and beneficially by such beneficial owner. In addition, such stockholder's notice shall be accompanied, as to each person whom the stockholder proposes to nominate for election or re-election as a director, by a completed and signed Director Questionnaire (as defined in Section 3.3) in the form required by the Corporation (which form the stockholder giving the notice shall request in writing from the Secretary of the Corporation and which the Secretary shall provide to such stockholder within 10 days of receiving such request), and each such person must attest to the accuracy of the information provided in such Director Questionnaire. At the request of the Board of Directors any person nominated by the Board of Directors for election as a director shall furnish to the secretary of the Corporation that information required to be set forth in a stockholder's notice of nomination which pertains to the nominee. No person shall be eligible for election as a director of the Corporation unless nominated in accordance with the procedures set forth in this Section 2.5. The chairperson of the meeting shall, if the facts warrant, determine and declare to the meeting that a nomination was not made in accordance with the procedures prescribed by the Bylaws, and if he or she should so determine, he or she shall so declare to the meeting and the defective nomination shall be disregarded.

SECTION 2.6 PROXY STATEMENT ACCESS FOR STOCKHOLDER DIRECTOR NOMINEES.

(a) Definitions. For purposes of this Section 2.6 the following terms shall have the following meanings:

(i) “Authorized Group Member” shall mean, with respect to any nomination by a Nominating Group (as defined below), the member of that Nominating Group that is authorized to act on behalf of all members of that Nominating Group with respect to matters relating to the nomination, including withdrawal of the nomination.

(ii) “Compensation Arrangement” shall mean any direct or indirect compensatory, payment or other financial agreement, arrangement or understanding with any person or entity other than the Corporation, including, without limitation, any agreement, arrangement or understanding with respect to any direct or indirect compensation, reimbursement or indemnification in connection with candidacy, nomination, service or action as a nominee or as a director of the Corporation.

(iii) “Eligible Stockholder” shall mean a person or entity who has either (A) been a record holder of shares of common stock of the Corporation used to satisfy the eligibility requirements in Section 2.6(d) continuously for the required three-year period or (B) provides to the Secretary of the Corporation, within the time period referred to in Section 2.6(e), evidence of continuous Ownership of such shares for such three-year period from one or more securities intermediaries.

(iv) “Maximum Number” shall mean that number of directors constituting the greater of (A) two or (B) 20% of the number of directors of the Corporation which, at such time, the holders of common stock of the Corporation are entitled to elect, on the last day on which a Nomination Notice may be submitted pursuant to this Section 2.6 (rounded down to the nearest whole number), which number shall be reduced as set forth in Section 2.6(c)(i).

(v) “Minimum Percentage” shall mean 5% of the number of outstanding shares of common stock of the Corporation as provided in the most recent filing under the Securities Exchange Act of 1934 made by the Corporation with the SEC immediately prior to the submission of the Nomination Notice.

(vi) “Nomination Notice” shall mean all information and documents that a Nominating Stockholder is required to submit to the Secretary of the Corporation pursuant to Section 2.6(f).

(vii) “Nominating Stockholder” shall mean any Eligible Stockholder or group of no more than 20 stockholders (a “Nominating Group”) that, individually and collectively, in the case of a Nominating Group, satisfies the requirements to qualify as an Eligible Stockholder and that (A) has (individually and collectively, in the case of a Nominating Group) satisfied all applicable conditions and complied with all applicable procedures set forth in this Section 2.6 (including, without limitation, the timely submission of a Nomination Notice that meets the requirements set forth in this Section 2.6) and (B) has nominated a Stockholder Nominee.

(viii) "Own" shall mean possession, with respect to those outstanding shares of common stock of the Corporation entitled to vote generally for the election of directors of the Corporation, of both: (A) the full voting and investment rights pertaining to such shares; and (B) the full economic and financial interest in (including, without limitation, the full and complete opportunity for profit and risk of loss on) such shares; provided, however, that the number of shares calculated in accordance with clauses (A) and (B) shall not include any shares: (1) sold by such stockholder or any of its affiliates in any transaction that has not been settled or closed, including, without limitation, any short sale; (2) borrowed by such stockholder or any of its affiliates for any purposes or purchased by such stockholder or any of its affiliates pursuant to an agreement to resell; or (3) subject to any option, warrant, forward contract, swap, contract of sale or other derivative or similar agreement entered into by such stockholder or any of its affiliates, whether any such instrument or agreement is to be settled with shares or with cash based on the notional amount or value of outstanding shares of stock of the Corporation, in any such case which instrument or agreement has, or is intended to have, or if exercised by either party thereto would have, the purpose or effect of (x) reducing in any manner, to any extent or at any time in the future, such stockholder's or affiliate's full right to vote or direct the voting of any such shares or (y) hedging, offsetting or altering to any degree any gain or loss arising from the full economic Ownership of such shares by such stockholder or affiliate, other than any such arrangements solely involving a national or multi-national multi-industry market index. A stockholder shall "Own" shares held in the name of a nominee or other intermediary so long as the stockholder retains the right to instruct how the shares are voted with respect to the election of directors and the right to direct the disposition thereof and possesses the full economic interest in the shares. A stockholder's Ownership of shares shall be deemed to continue during any period in which (A) the stockholder has loaned such shares, provided that the stockholder has the power to recall such loaned shares on notice of five business days or less, or (B) the stockholder has delegated any voting power over such shares by means of a proxy, power of attorney or other instrument or arrangement which is revocable at any time by the stockholder. The terms "Owned," "Owning," "Ownership" and other variations of the word "Own" shall have correlative meanings.

(ix) "SEC" shall mean the United States Securities and Exchange Commission.

(x) "Stock Exchange Rules" shall mean the rules of any stock exchange on which the Corporation's securities are traded.

(xi) "Stockholder Nominee" shall mean any person nominated for election pursuant to this Section 2.6.

(xii) "Voting Commitment" shall mean any agreement, arrangement or understanding with, and any commitment or assurance to, any person or entity as to how a person, if elected as a director of the Corporation, will act or vote on any issue or question.

(b) Proxy Access at Annual Meetings. Subject to the satisfaction of the requirements of this Section 2.6, if expressly requested in the relevant Nomination Notice, the Corporation shall include in its proxy statement for any annual meeting of stockholders:

(i) the name of any Stockholder Nominee, which shall also be included on the Corporation's form of proxy and ballot;

(ii) disclosure about the Stockholder Nominee and the Nominating Stockholder required under the rules of the SEC or other applicable law, rule or regulation to be included in the proxy statement; and

(iii) a statement included by the Nominating Stockholder in the Nomination Notice for inclusion in the proxy statement in support of the Stockholder Nominee's election to the Board of Directors (subject, without limitation, to Section 2.6(g)(iii)), but only if such statement does not exceed 500 words.

For the avoidance of doubt, the provisions of this Section 2.6 shall not apply to a special meeting of stockholders.

(c) Maximum Number of Stockholder Nominees.

(i) The Corporation shall not be required to include in the proxy statement for an annual meeting of stockholders more Stockholder Nominees than the Maximum Number. In the event that one or more vacancies for any reason occurs on the Board of Directors after the deadline set forth in Section 2.6(e) but before the date of the annual meeting and the Board of Directors resolves to reduce the size of the Board of Directors in connection therewith, the Maximum Number shall be calculated based on the number of directors in office as so reduced. The Maximum Number for a particular annual meeting shall be reduced by:

(A) Stockholder Nominees whose nominations for election at such annual meeting are subsequently withdrawn;

(B) Stockholder Nominees whom the Board of Directors itself decides to nominate for election at such annual meeting;

(C) the number of incumbent directors or director candidates (including, without limitation, candidates who are not Stockholder Nominees) that in either case will be included in the Corporation's proxy materials for an annual meeting of stockholders as unopposed (by the Corporation) nominees pursuant to any agreement, arrangement or other understanding with any stockholder or group of stockholders; and

(D) the number of incumbent directors who were Stockholder Nominees at any of the preceding two annual meetings of stockholders and whose reelection at the upcoming annual meeting is being recommended by the Board of Directors.

(ii) Any Nominating Stockholder submitting more than one Stockholder Nominee for inclusion in the Corporation's proxy materials pursuant to this Section 2.6 shall rank such Stockholder Nominees based on the order that the Nominating Stockholder desires such Stockholder Nominees to be selected for inclusion in the Corporation's proxy materials. In the event that the number of Stockholder Nominees submitted by Nominating Stockholders pursuant to this Section 2.6 exceeds the Maximum Number, the highest ranking Stockholder Nominee who meets the requirements of this Section 2.6 from each Nominating Stockholder will be selected for inclusion in the Corporation's proxy materials until the Maximum Number is reached, going in order of the amount (largest to smallest) of the shares of common stock of the Corporation that each Nominating Stockholder disclosed as Owned in its respective Nomination Notice submitted to the Corporation. This selection process will continue with the next highest ranking nominees as many times as necessary, following the same order each time, until the Maximum Number is reached.

(d) Eligible Stockholders.

(i) An Eligible Stockholder or Nominating Group may submit a nomination in accordance with this Section 2.6 only if the Eligible Stockholder or Nominating Group (in the aggregate) has continuously Owned at least the Minimum Percentage of shares of common stock of the Corporation (as adjusted for any stock splits, stock dividends, subdivisions, combinations, reclassifications, recapitalizations or similar events) throughout the three-year period preceding and including the date of submission of the Nomination Notice, and continues to Own at least the Minimum Percentage of shares of common stock of the Corporation through the date of the annual meeting. No shares may be attributed to more than one Eligible Stockholder. The following shall be treated as one Eligible Stockholder or one member of a Nominating Group if such Eligible Stockholder or member of a Nominating Group shall provide together with the Nomination Notice documentation that demonstrates compliance with the following criteria: (A) funds under common management and investment control; (B) funds under common management and funded primarily by the same employer; or (C) a "family of investment companies" or a "group of investment companies" (each as defined in or under the Investment Company Act of 1940, as amended).

(ii) For the avoidance of doubt, in the event of a nomination by a Nominating Group, any and all requirements and obligations for a given Eligible Stockholder (including, without limitation, each and every fund or company that comprises the Nominating Group) that are set forth in this Section 2.6, including, without limitation, the minimum holding period, shall apply to each member of such Nominating Group; provided, however, that the Minimum Percentage of shares shall apply to the Ownership of the Nominating Group in the aggregate. In the event that any stockholder withdraws from a Nominating Group at any time prior to the annual meeting of stockholders, the Nominating Group shall only be deemed to Own the shares held by the remaining members of that Nominating Group. No stockholder shall be permitted to be in more than one Nominating Group.

(e) Timely Nomination Notice. To be timely, a Nomination Notice must be delivered to or mailed to the Secretary of the Corporation and received at the principal executive offices of the Corporation not later than 5:00 p.m. Eastern Time on the 120th day nor earlier than 5:00 p.m. Eastern Time on the 150th day prior to the first anniversary of the date (as stated in the Corporation's proxy materials relating to that annual meeting) on which the Corporation first mailed its proxy statement for the previous year's annual meeting of stockholders of the Corporation, except where information or documents are required to be provided after the date the Nomination Notice is first submitted, as set forth in this Section 2.6; provided, however, that, in the event that no annual meeting was held in the previous year or the date of the annual meeting has been changed by more than thirty (30) days from the date of the previous year's meeting, to be timely, the Nomination Notice must be received not later than 5:00 p.m. Eastern Time on the tenth day following the day on which public announcement of the date of the annual meeting is first made. In no event shall the adjournment or postponement of an annual meeting, or the public announcement of such an adjournment or postponement, commence a new time period (or extend any time period) for the giving of a Nomination Notice.

(f) Nomination Notice. The Nomination Notice shall consist of, collectively, the following information, documents and agreements which shall, for the avoidance of doubt, be compiled, completed and submitted by the Nominating Stockholder or its representatives at its own cost:

(i) with respect to the Nominating Stockholder or, in the case of a Nominating Group, each member of the Nominating Group, documentary evidence in the form of one or more written statements from the record holder of the shares of common stock of the Corporation (and from each intermediary through which the shares are or have been held during the requisite three-year holding period, provided that each such intermediary must be a participant in the Depository Trust Company or an affiliate of a participant in the Depository Trust Company) and a representation from the Nominating Stockholder (or the Authorized Group Member on behalf of each member of a Nominating Group) verifying and certifying that, as of a date within seven calendar days prior to the date of the Nomination Notice, the Nominating Stockholder (individually or collectively, in the case of a Nominating Group) Owns, and has continuously Owned for the preceding three years, the Minimum Percentage of shares, and the Nominating Stockholder's agreement to provide, within five business days after the record date for the annual meeting, documentary evidence in the form of written statements from each record holder and intermediary and a representation from the Nominating Stockholder (or the Authorized Group Member on behalf of each member of a Nominating Group) verifying and certifying the Nominating Stockholder's continuous Ownership (individually or collectively, in the case of a Nominating Group) of the Minimum Percentage of shares through the record date;

(ii) an undertaking to provide immediate notice if the Nominating Stockholder ceases to Own the Minimum Percentage of shares prior to the date of the annual meeting;

(iii) a copy of the Schedule 14N (or any successor form) relating to the Stockholder Nominee, completed and filed with the SEC by the Nominating Stockholder as applicable, in accordance with SEC rules;

(iv) the written consent of each Stockholder Nominee to being named in the Corporation's proxy statement, form of proxy and ballot as a nominee and to serving as a director if elected;

(v) a written notice of the nomination of such Stockholder Nominee that includes the following additional information, agreements, representations and warranties by the Nominating Stockholder (including, for the avoidance of doubt, each member of a Nominating Group):

(A) the information and other deliverables that would be required to be set forth in a stockholder's notice of nomination pursuant to Section 2.5 of these Bylaws, as if the Nominating Stockholder were the proposing stockholder under that section;

(B) to the extent not included in the response to paragraph (A) above, a detailed description of all material relationships, between or among the Nominating Stockholder, on the one hand, and each Stockholder Nominee, on the other hand, including, without limitation, all information that would be required to be disclosed pursuant to Item 404 of Regulation S-K (or its successor Item) if the Nominating Stockholder were the "registrant" for purposes of such item and the Stockholder Nominee were a director or executive officer of such registrant;

(C) the details of any relationship that existed within the past three years and that would have been described pursuant to Item 6(e) of Schedule 14N (or any successor item) if it existed on the date of submission of the Schedule 14N;

(D) a representation and warranty that the Nominating Stockholder did not acquire, and is not holding, securities of the Corporation for the purpose or with the effect of influencing or changing control of the Corporation;

(E) a representation and warranty that the Nominating Stockholder has not nominated and a covenant that it will not nominate for election to the Board of Directors at the annual meeting any person other than such Nominating Stockholder's Stockholder Nominee(s);

(F) a representation and warranty that the Nominating Stockholder has not engaged in and a covenant that it will not engage in a "solicitation" within the meaning of Rule 14a-1(l) under the Securities Exchange Act of 1934 with respect to the annual meeting, other than with respect to such Nominating Stockholder's Stockholder Nominee(s) or any nominee of the Board of Directors;

(G) a covenant that the Nominating Stockholder will not use or distribute any proxy card other than the Corporation's proxy card in soliciting stockholders in connection with the election of a Stockholder Nominee at the annual meeting;

(H) a representation and warranty that the Stockholder Nominee's candidacy or, if elected, membership on the Board of Directors would not violate applicable state or federal law or Stock Exchange Rules;

(I) a representation and warranty that the Stockholder Nominee: (1) qualifies as independent under the Stock Exchange Rules and any publicly disclosed standards used by the Board of Directors in determining and disclosing the independence of the directors; and (2) is not and has not been subject to any event specified in Rule 506(d)(1) of Regulation D (or any successor rule) under the Securities Act of 1933, as amended, or Item 401(f) of Regulation S-K (or any successor rule), without reference to whether the event is material to an evaluation of the ability or integrity of the Stockholder Nominee;

(J) a representation and warranty that the Nominating Stockholder satisfies the eligibility requirements set forth in Section 2.6(d);

(K) a covenant that the Nominating Stockholder will continue to satisfy the eligibility requirements described in Section 2.6(d) through the date of the annual meeting;

(N) the details of any position of the Stockholder Nominee as an officer or director of any competitor (that is, any entity that provides products or services that compete with or are alternatives to the principal products produced or services provided by the Corporation or its affiliates) of the Corporation, within the three years preceding the submission of the Nomination Notice;

(L) if desired by the Nominating Stockholder and subject to Section 2.6(g)(ii), a statement for inclusion in the proxy statement in support of the Stockholder Nominee's election to the Board of Directors. Any such statement shall not exceed 500 words and shall fully comply with Section 14 of the Securities Exchange Act of 1934 and the rules and regulations thereunder; and

(M) in the case of a nomination by a Nominating Group, the designation by all group members of one Authorized Group Member.

(vi) an executed agreement (which form of agreement shall be provided by the Secretary of the Corporation upon written request), which must be submitted within ten days after the date on which the Secretary of the Corporation provides the form of agreement, pursuant to which the Nominating Stockholder (including each member of a Nominating Group) agrees:

(A) to comply with all applicable laws, rules and regulations in connection with the nomination, solicitation and election;

(B) to file any written solicitation or other communication with the Corporation's stockholders relating to one or more of the Corporation's directors or director nominees or any Stockholder Nominee with the SEC, regardless of whether any such filing is required under any rule or regulation or whether any exemption from filing is available for such materials under any rule or regulation;

(C) to assume all liability stemming from any action, suit or proceeding concerning any actual or alleged legal or regulatory violation arising out of any communication by the Nominating Stockholder or the Stockholder Nominee nominated by such Nominating Stockholder with the Corporation, its stockholders or any other person or entity, including, without limitation, the Nomination Notice;

(D) to indemnify and hold harmless (jointly with all other members of a Nominating Group, if applicable) the Corporation and each of its directors, officers and employees individually against any liability, loss, damages, expenses or other costs (including, without limitation, attorneys' fees) incurred in connection with any action, suit or proceeding (whether threatened, pending or completed), whether legal, judicial, administrative or investigative, against the Corporation or any of its directors, officers or employees arising out of or relating to a failure or alleged failure of the Nominating Stockholder or Stockholder Nominee to comply with, or any breach or alleged breach of, its, or his or her, as applicable, obligations, agreements or representations under or pursuant to this Section 2.6;

(E) to promptly (and in any event within 48 hours of discovering such misstatement or omission) notify the Corporation if any information included in the Nomination Notice, or in any other communication by the Nominating Stockholder (including with respect to any member of a Nominating Group) with the Corporation, its stockholders or any other person in connection with the nomination or election, ceases to be true and accurate in all material respects (or omits a material fact necessary to make the statements made not misleading), and promptly notify the Corporation of the information that is required to correct the misstatement or omission; and

(F) in the event that the Nominating Stockholder (including any member of a Nominating Group) has failed to continue to satisfy the eligibility requirements described in Section 2.6(d), to promptly notify the Corporation.

(vii) an executed questionnaire, representation and agreement pursuant to Section 2.6(h) (which forms of questionnaire, representation and agreement shall be provided by the Secretary of the Corporation promptly upon written request), which must be submitted within ten days after the date on which the Secretary of the Corporation provides the Nominating Stockholder (or the Authorized Group Member, in the case of a Nominating Group) the forms of questionnaire, representation and agreement.

The information and documents required by this Section 2.6(f) shall be provided with respect to and executed by the Nominating Stockholder (and each member of a Nominating Group), and provided with respect to the persons or entities specified in Instructions 1 and 2 to Items 6(c) and (d) of Schedule 14N (or any successor item). The Nomination Notice shall be deemed submitted on the date on which all of the information and documents referred to in this Section 2.6(f) (other than such information and documents required to be provided after the date the Nomination Notice is first submitted) have been delivered to or, if sent by mail, received by the Secretary of the Corporation.

(g) Exclusion or Disqualification of Stockholder Nominees.

(i) If, after the deadline for submitting a Nomination Notice as set forth in Section 2.6(e), a Nominating Stockholder becomes ineligible or withdraws its nomination or a Stockholder Nominee becomes ineligible or unwilling to serve on the Board of Directors, whether before or after the mailing of the Corporation's definitive proxy statement, the Corporation shall not be required to include in its proxy statement or on any ballot or form of proxy the Stockholder Nominee or any successor or replacement nominee proposed by the Nominating Stockholder or by any other Nominating Stockholder.

(ii) Notwithstanding anything to the contrary contained in this Section 2.6, the Corporation may omit from its proxy materials any Stockholder Nominee, and any information concerning such Stockholder Nominee (including a Nominating Stockholder's statement in support), and communicate to its stockholders that such Stockholder Nominee will not be eligible for election at the annual meeting or that no vote will be held or occur as to such Stockholder Nominee, if:

(A) the Corporation receives a notice (whether or not subsequently withdrawn) that a stockholder intends to nominate any candidate for election to the Board of Directors at the annual meeting pursuant to the advance notice requirements for stockholder nominees set forth in Section 2.5 of these Bylaws;

(B) the Nominating Stockholder has engaged in a "solicitation" within the meaning of Rule 14a-1(l) under the Securities Exchange Act of 1934 with respect to the annual meeting, other than with respect to such Nominating Stockholder's Stockholder Nominee(s) or any nominee of the Board of Directors;

(C) the Nominating Stockholder or the Authorized Group Member, as applicable, or any qualified representative thereof, does not appear at the annual meeting to present the nomination submitted in accordance with this Section 2.6;

(D) the Board of Directors, acting in good faith, determines that such Stockholder Nominee's nomination or election to the Board of Directors would result in the Corporation violating or failing to be in compliance with these Bylaws or the Certificate of Incorporation or any applicable law, rule or regulation to which the Corporation is subject, including the Stock Exchange Rules;

(E) the Stockholder Nominee was nominated for election to the Board of Directors pursuant to this Section 2.6 at one of the Corporation's two preceding annual meetings of stockholders and either withdrew from or became ineligible or unavailable for election at such annual meeting or received a vote of less than 20% of the shares of common stock of the Corporation entitled to vote for such Stockholder Nominee;

(F) the Stockholder Nominee has been, within the past three years, an officer or director of a competitor, as defined for purposes of Section 8 of the Clayton Antitrust Act of 1914, as amended; and

(G) the Nominating Stockholder has failed to continue to satisfy the eligibility requirements described in Section 2.6(d), any of the representations and warranties made in the Nomination Notice ceases to be true and accurate in all material respects (or omits a material fact necessary to make the statement made not misleading), the Stockholder Nominee becomes unwilling or unable to serve on the Board of Directors or any violation or breach occurs of any of the obligations, agreements, representations or warranties of the Nominating Stockholder or the Stockholder Nominee under or pursuant to this Section 2.6 and in such case such nomination shall be disregarded and no vote on such Stockholder Nominee will occur (notwithstanding that proxies in respect of such vote may have been received by the Corporation), and the Nominating Stockholder may not, after the last day on which a Nomination Notice would be timely, cure in any way any defect preventing the nomination of the Stockholder Nominee.

(iii) Notwithstanding anything to the contrary contained in this Section 2.6 the Corporation may omit from its proxy statement, or may supplement or correct, any information, including, without limitation, all or any portion of the statement in support of the Stockholder Nominee included in the Nomination Notice, if:

(A) such information is not true in all material respects or omits a material statement necessary to make the statements made not misleading;

(B) such information directly or indirectly impugns the character, integrity or personal reputation of, or directly or indirectly makes charges concerning improper, illegal or immoral conduct or associations, without factual foundation, with respect to, any individual, corporation, partnership, association or other entity, organization or governmental authority; or

(C) the inclusion of such information in the proxy statement would otherwise violate the SEC proxy rules or any other applicable law, rule or regulation.

(iv) The Corporation may solicit against, and include in the proxy statement its own statement in opposition to the nomination of the Stockholder Nominee and any other statement or information that the Corporation or the Board of Directors determines in its discretion to include in the proxy statement relating to the Stockholder Nominee.

(h) Submission of Questionnaire, Representation and Agreement. To be eligible to be a nominee for election as a director of the Corporation, the person proposed to be nominated must deliver or mail (in accordance with the time periods prescribed for delivery of notice under this Section 2.6) to the Secretary an executed questionnaire (in the form available from the Secretary) with respect to the background and qualification of such person to serve as a director of the Corporation and the background of any other person or entity on whose behalf the nomination is being made and an executed representation and agreement (in the form available from the Secretary) that such person:

(i) is not and will not become a party to (A) any Voting Commitment that has not been disclosed to the Corporation or (B) any Voting Commitment that could limit or interfere with such person's ability to comply, if elected as a director of the Corporation, with such person's fiduciary duties under applicable law;

(ii) is not and will not become a party to any Compensation Arrangement that has not been disclosed to the Corporation;

(iii) if elected as a director of the Corporation, will comply with all informational and similar requirements of applicable insurance policies and laws and regulations in connection with service or action as a director of the Corporation;

(iv) if elected as a director of the Corporation, will comply with all publicly disclosed corporate governance, conflict of interest, stock ownership requirements, confidentiality and trading policies and guidelines of the Corporation;

(v) if elected as a director of the Corporation, will act in the best interests of the Corporation and its stockholders and not in the interests of individual constituencies; and

(vi) will promptly provide to the Corporation such other information as it may reasonably request.

2.7 QUORUM.

The holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the Certificate of Incorporation. If, however, such quorum is not present or represented at any meeting of the stockholders, then either (a) the chairperson of the meeting or (b) the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present or represented. At such adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the meeting as originally noticed.

2.8 ADJOURNED MEETING; NOTICE.

When a meeting is adjourned to another time or place, unless these Bylaws otherwise require, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting the Corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

2.9 CONDUCT OF BUSINESS.

The chairperson of any meeting of stockholders shall determine the order of business and the procedure at the meeting, including the manner of voting and the conduct of business.

2.10 VOTING.

(a) The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.12 of these Bylaws, subject to the provisions of Sections 217 and 218 of the General Corporation Law of Delaware (relating to voting rights of fiduciaries, pledgors and joint owners of stock and to voting trusts and other voting agreements).

(b) Except as may be otherwise provided in the Certificate of Incorporation, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder.

(c) Except for the election of directors and where otherwise required by law, all matters shall be determined by a majority of the votes cast. Each director shall be elected by the vote of the majority of the votes cast with respect to that director's election at any meeting for the election of directors at which a quorum is present; provided that if, as of the 10th day preceding the date that the Corporation first mails its notice of meeting for such meeting to the stockholders of the Corporation, the Corporation has received a stockholder's notice in accordance with Section 2.5 for nominations of persons for election to the Board of Directors at such meeting, the directors shall be elected by the vote of a plurality of the votes cast at such meeting. For purposes of this Section 2.10, a majority of votes cast shall mean that the number of votes cast "for" a director's election exceeds the number of votes cast "against" such director's election (with "abstentions" and "broker non-votes" not counting as either a vote cast "for" or "against" such director's election).

2.11 WAIVER OF NOTICE.

Whenever notice is required to be given under any provision of the General Corporation Law of Delaware or of the Certificate of Incorporation or these Bylaws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice unless so required by the Certificate of Incorporation or these Bylaws.

2.12 RECORD DATE FOR STOCKHOLDER NOTICE; VOTING.

In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days prior to any other action. If the Board of Directors does not so fix a record date:

(a) The record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

(b) The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

2.13 PROXIES.

Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by a written proxy, signed by the stockholder and filed with the secretary of the Corporation, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. A proxy shall be deemed signed if the stockholder's name is placed on the proxy (whether by manual signature, typewriting, electronic or telegraphic transmission or otherwise) by the stockholder or the stockholder's attorney-in-fact. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212(e) of the General Corporation Law of Delaware.

ARTICLE III

DIRECTORS

3.1 POWERS.

Subject to the provisions of the General Corporation Law of Delaware and any limitations in the Certificate of Incorporation or these Bylaws relating to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the Corporation shall be managed and all corporate powers shall be exercised by or under the direction of the Board of Directors.

3.2 NUMBER OF DIRECTORS.

The number of directors constituting the entire Board of Directors shall be seven.

Thereafter, this number may be changed by a resolution of the Board of Directors or of the stockholders, subject to Section 3.4 of these Bylaws. No reduction of the authorized number of directors shall have the effect of removing any director before such director's term of office expires.

3.3 ELECTION, QUALIFICATION AND TERM OF OFFICE OF DIRECTORS.

Except as provided in Section 3.4 of these Bylaws, directors shall be elected at each annual meeting of stockholders to hold office until the next annual meeting. Directors need not be stockholders unless so required by the Certificate of Incorporation or these Bylaws, wherein other qualifications for directors may be prescribed. Each director, including a director elected to fill a vacancy, shall hold office until his or her successor is elected and qualified or until his or her earlier resignation or removal. Each nominee for director shall provide to the Secretary of the Corporation a signed and completed written questionnaire with respect to the background and qualifications of such nominee in the form required by the Corporation (the "Director Questionnaire"), and each nominee for director must attest to the accuracy of the information provided in such Director Questionnaire.

3.4 RESIGNATION AND VACANCIES.

Any director may resign at any time upon written notice to the attention of the secretary of the Corporation. Any vacancies on the Board of Directors shall be filled as set forth in the Certificate of Incorporation..

3.5 PLACE OF MEETINGS; MEETINGS BY TELEPHONE.

The Board of Directors of the Corporation may hold meetings, both regular and special, either within or outside the State of Delaware. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, members of the Board of Directors, or any committee designated by the Board of Directors, may participate in a meeting of the Board of Directors, or any committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

3.6 REGULAR MEETINGS.

Regular meetings of the Board of Directors may be held without notice at such time and at such place as shall from time to time be determined by the Board of Directors.

3.7 SPECIAL MEETINGS; NOTICE.

Special meetings of the board of directors for any purpose or purposes may be called at any time by the Chairperson of the Board, the president, any vice president, the secretary or any two (2) directors.

Notice of the time and place of special meetings shall be delivered personally or by telephone to each director or sent by first-class mail or telegram, charges prepaid, addressed to each director at that director's address as it is shown on the records of the Corporation. If the notice is mailed, it shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. If the notice is delivered personally or by telephone, telecopy, telegram, telex or other similar means of communication, it shall be delivered at least twenty-four (24) hours before the time of the holding of the meeting, or on such shorter notice as the person or persons calling such meeting may deem necessary and appropriate in the circumstances. Any oral notice given personally or by telephone may be communicated either to the director or to a person at the office of the director who the person giving the notice has reason to believe will promptly communicate it to the director. The notice need not specify the purpose of the place of the meeting, if the meeting is to be held at the principal executive office of the Corporation.

3.8 QUORUM.

At all meetings of the Board of Directors, a majority of the authorized number of directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be otherwise specifically provided by statute or by the Certificate of Incorporation. If a quorum is not present at any meeting of the Board of Directors, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for that meeting.

3.9 WAIVER OF NOTICE.

Whenever notice is required to be given under any provision of the General Corporation Law of Delaware or of the Certificate of Incorporation or these Bylaws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the directors, or members of a committee of directors, need be specified in any written waiver of notice unless so required by the Certificate of Incorporation or these Bylaws.

3.10 BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING.

Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors, or of any committee thereof, may be taken without a meeting if all members of the Board of Directors or committee, as the case may be, consent thereto in writing and the writing or writings are filed with the minutes of proceedings of the Board of Directors or committee. Written consents representing actions taken by the board or committee may be executed by telex, telecopy or other facsimile transmission, and such facsimile shall be valid and binding to the same extent as if it were an original.

3.11 FEES AND COMPENSATION OF DIRECTORS.

Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, the Board of Directors shall have the authority to fix the compensation of directors. No such compensation shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefor.

3.12 APPROVAL OF LOANS TO OFFICERS.

The Corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiary, including any officer or employee who is a director of the Corporation or its subsidiary, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 3.2 contained shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

3.13 REMOVAL OF DIRECTORS.

Unless otherwise restricted by statute, by the Certificate of Incorporation or by these Bylaws, any director or the entire Board of Directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors; provided, however, that if the stockholders of the Corporation are entitled to cumulative voting, if less than the entire Board of Directors is to be removed, no director may be removed without cause if the votes cast against his removal would be sufficient to elect him if then cumulatively voted at an election of the entire Board of Directors.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of such director's term of office.

3.14 CHAIRPERSON OF THE BOARD OF DIRECTORS.

The Board of Directors may, but is not required to, designate a chairperson of the Board of Directors (the "Chairperson of the Board"), who shall not be considered an officer of the Corporation. Unless determined otherwise by the Board of Directors, the Chairperson of the Board and the Chief Executive Officer shall be separate individuals. Unless determined otherwise by the Board of Directors, or as contemplated under the provisions of Section 3.15 (Lead Independent Director) of these Bylaws, the Chairperson of the Board shall be the chairperson of the meeting at meetings of stockholders and meetings of the Board.

3.15 Lead Independent Director.

The independent directors of the Board of Directors may, but are not required to, designate an independent director to serve as the lead independent director of the Board of Directors (the "Lead Independent Director"). If the Board has not designated a Chairperson of the Board or the Chairperson of the Board is absent, unless determined otherwise by the Board of Directors, the Lead Independent Director shall be the chairperson of the meeting at meetings of stockholders and meetings of the Board. If the Board has not designated a Chairperson of the Board, the Lead Independent Director may exercise all rights and powers granted to the Chairperson of the Board under these Bylaws.

ARTICLE IV

COMMITTEES

4.1 COMMITTEES OF DIRECTORS.

The Board of Directors may, by resolution passed by a majority of the whole Board of Directors, designate one or more committees, with each committee to consist of one or more of the directors of the Corporation. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors or in the Bylaws of the Corporation, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority to (a) amend the Certificate of Incorporation (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of stock adopted by the Board of Directors as provided in Section 151(a) of the General Corporation Law of Delaware, fix the designations and any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of assets of the Corporation or the conversion into, or the exchange of such shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the Corporation or fix the number of shares of any series of stock or authorize the increase or decrease of the shares of any series), (b) adopt an agreement of merger or consolidation under Sections 251 or 252 of the General Corporation Law of Delaware, (c) recommend to the stockholders the sale, lease or exchange of all or substantially all of the Corporation's property and assets, (d) recommend to the stockholders a dissolution of the Corporation or a revocation of a dissolution, or (e) amend the Bylaws of the Corporation; and, unless the board resolution establishing the committee, the Bylaws or the Certificate of Incorporation expressly so provide, no such committee shall have the power or authority to declare a dividend, to authorize the issuance of stock, or to adopt a certificate of ownership and merger pursuant to Section 253 of the General Corporation Law of Delaware.

4.2 COMMITTEE MINUTES.

Each committee shall keep regular minutes of its meetings and report the same to the Board of Directors when required.

4.3 MEETINGS AND ACTION OF COMMITTEES.

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of Section 3.5 (place of meetings and meetings by telephone), Section 3.6 (regular meetings), Section 3.7 (special meetings and notice), Section 3.8 (quorum), Section 3.9 (waiver of notice), and Section 3.10 (action without a meeting) of these Bylaws, with such changes in the context of such provisions as are necessary to substitute the committee and its members for the Board of Directors and its members; provided, however, that the time of regular meetings of committees may be determined either by resolution of the Board of Directors or by resolution of the committee, that special meetings of committees may also be called by resolution of the Board of Directors and that notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The Board of Directors may adopt rules for the government of any committee not inconsistent with the provisions of these Bylaws.

ARTICLE V

OFFICERS

5.1 OFFICERS.

The officers of the Corporation shall be a chief executive officer, a president, a secretary, and a chief financial officer. The Corporation may also have, at the discretion of the Board of Directors, one or more vice presidents, one or more assistant secretaries, one or more assistant treasurers, and any such other officers as may be appointed in accordance with the provisions of Section 5.3 of these Bylaws. Any number of offices may be held by the same person.

5.2 APPOINTMENT OF OFFICERS.

The officers of the Corporation, except such officers as may be appointed in accordance with the provisions of Sections 5.3 or 5.5 of these Bylaws, shall be appointed by the Board of Directors, subject to the rights, if any, of an officer under any contract of employment.

5.3 SUBORDINATE OFFICERS.

The Board of Directors may appoint, or empower the chief executive officer or the president to appoint, such other officers and agents as the business of the Corporation may require, each of whom shall hold office for such period, have such authority, and perform such duties as are provided in these Bylaws or as the Board of Directors may from time to time determine.

5.4 REMOVAL AND RESIGNATION OF OFFICERS.

Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by an affirmative vote of the majority of the Board of Directors at any regular or special meeting of the Board of Directors or, except in the case of an officer chosen by the Board of Directors, by any officer upon whom such power

of removal may be conferred by the Board of Directors.

Any officer may resign at any time by giving written notice to the attention of the secretary of the Corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the Corporation under any contract to which the officer is a party.

5.5 VACANCIES IN OFFICES.

Any vacancy occurring in any office of the Corporation shall be filled by the Board of Directors.

5.6 CHIEF EXECUTIVE OFFICER.

Subject to such supervisory powers, if any, as may be given by the Board of Directors to the Chairperson of the Board, if any, the chief executive officer of the Corporation shall, subject to the control of the Board of Directors, have general supervision, direction, and control of the business and the officers of the Corporation. He or she shall have the general powers and duties of management usually vested in the office of chief executive officer of a corporation and shall have such other powers and duties as may be prescribed by the Board of Directors or these Bylaws.

5.7 PRESIDENT.

Subject to such supervisory powers, if any, as may be given by the Board of Directors to the Chairperson of the Board (if any) or the chief executive officer, the president shall have general supervision, direction, and control of the business and other officers of the Corporation. He or she shall have the general powers and duties of management usually vested in the office of president of a corporation and such other powers and duties as may be prescribed by the Board of Directors or these Bylaws.

5.8 VICE PRESIDENTS.

In the absence or disability of the chief executive officer and president, the vice presidents, if any, in order of their rank as fixed by the Board of Directors or, if not ranked, a vice president designated by the Board of Directors, shall perform all the duties of the president and when so acting shall have all the powers of, and be subject to all the restrictions upon, the president. The vice presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the Board of Directors, these Bylaws, the president or the Chairperson of the Board.

5.9 SECRETARY.

The secretary shall keep or cause to be kept, at the principal executive office of the Corporation or such other place as the Board of Directors may direct, a book of minutes of all meetings and actions of directors, committees of directors, and stockholders. The minutes shall show the time and place of each meeting, the names of those present at directors' meetings or committee meetings, the number of shares present or represented at stockholders' meetings, and the proceedings thereof.

The secretary shall keep, or cause to be kept, at the principal executive office of the Corporation or at the office of the Corporation's transfer agent or registrar, as determined by resolution of the Board Of Directors, a share register, or a duplicate share register, showing the names of all stockholders and their addresses, the number and classes of shares held by each, the number and date of certificates evidencing such shares, and the number and date of cancellation of every certificate surrendered for cancellation.

The secretary shall give, or cause to be given, notice of all meetings of the stockholders and of the Board of Directors required to be given by law or by these Bylaws. He or she shall keep the seal of the Corporation, if one be adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors or by these Bylaws.

5.10 CHIEF FINANCIAL OFFICER.

The chief financial officer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the Corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital retained earnings, and shares. The books of account shall at all reasonable times be open to inspection by any director.

The chief financial officer shall deposit all moneys and other valuables in the name and to the credit of the Corporation with such depositories as may be designated by the Board of Directors. He or she shall disburse the funds of the Corporation as may be ordered by the Board of Directors, shall render to the president, the chief executive officer, or the directors, upon request, an account of all his or her transactions as chief financial officer and of the financial condition of the Corporation, and shall have other powers and perform such other duties as may be prescribed by the Board of Directors or the Bylaws.

5.11 REPRESENTATION OF SHARES OF OTHER CORPORATIONS.

The Chairperson of the Board, the chief executive officer, the president, any vice president, the chief financial officer, the secretary or assistant secretary of this Corporation, or any other person authorized by the Board of Directors or the chief executive officer or the president or a vice president, is authorized to vote, represent, and exercise on behalf of this Corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of this Corporation. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by the person having such authority.

5.12 AUTHORITY AND DUTIES OF OFFICERS.

In addition to the foregoing authority and duties, all officers of the Corporation shall respectively have such authority and perform such duties in the management of the business of the Corporation as may be designated from time to time by the Board of Directors or the stockholders.

ARTICLE VI

INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES, AND OTHER AGENTS

6.1 INDEMNIFICATION OF DIRECTORS AND OFFICERS.

The Corporation shall, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware, indemnify each of its directors and officers against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the Corporation. For purposes of this Section 6.1, a "director" or "officer" of the Corporation includes any person (a) who is or was a director or officer of the Corporation, (b) who is or was serving at the request of the Corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, or (c) who was a director or officer of a Corporation which was a predecessor corporation of the Corporation or of another enterprise at the request of such predecessor corporation.

6.2 INDEMNIFICATION OF OTHERS.

The Corporation shall have the power, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware, to indemnify each of its employees and agents (other than directors and officers) against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the Corporation. For purposes of this Section 6.2, an "employee" or "agent" of the Corporation (other than a director or officer) includes any person (a) who is or was an employee or agent of the Corporation, (b) who is or was serving at the request of the Corporation as an employee or agent of another corporation, partnership, joint venture, trust or other enterprise, or (c) who was an employee or agent of a corporation which was a predecessor corporation of the Corporation or of another enterprise at the request of such predecessor corporation.

6.3 PAYMENT OF EXPENSES IN ADVANCE.

Expenses incurred in defending any action or proceeding for which indemnification is required pursuant to Section 6.1 or for which indemnification is permitted pursuant to Section 6.2 following authorization thereof by the Board of Directors shall be paid by the Corporation in advance of the final disposition of such action or proceeding upon receipt of an undertaking by or on behalf of the indemnified party to repay such amount if it shall ultimately be determined that the indemnified party is not entitled to be indemnified as authorized in this Article VI.

6.4 INDEMNITY NOT EXCLUSIVE.

The indemnification provided by this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification may be entitled under any Bylaw, agreement, vote of shareholders or disinterested directors or otherwise, both as to action in an official capacity and as to action in another capacity while holding such office, to the extent that such additional rights to indemnification are authorized in the Certificate of Incorporation.

6.5 INSURANCE.

The Corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him or her and incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the Corporation would have the power to indemnify him or her against such liability under the provisions of the General Corporation Law of Delaware.

6.6 CONFLICTS.

No indemnification or advance shall be made under this Article VI, except where such indemnification or advance is mandated by law or the order, judgment or decree of any court of competent jurisdiction, in any circumstance where it appears:

(a) That it would be inconsistent with a provision of the Certificate of Incorporation, these Bylaws, a resolution of the stockholders or an agreement in effect at the time of the accrual of the alleged cause of the action asserted in the proceeding in which the expenses were incurred or other amounts were paid, which prohibits or otherwise limits indemnification; or

(b) That it would be inconsistent with any condition expressly imposed by a court in approving a settlement.

ARTICLE VII

RECORDS AND REPORTS

7.1 MAINTENANCE AND INSPECTION OF RECORDS.

The Corporation shall, either at its principal executive offices or at such place or places as designated by the Board of Directors, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these Bylaws as amended to date, accounting books, and other records.

Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the Corporation's stock ledger, a list of its stockholders, and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or other agent to so act on behalf of the stockholder. The demand under oath shall be directed to the Corporation at its registered office in Delaware or at its principal place of business.

7.2 INSPECTION BY DIRECTORS.

Any director shall have the right to examine the Corporation's stock ledger, a list of its stockholders, and its other books and records for a purpose reasonably related to his or her position as a director. The Court of Chancery is hereby vested with the exclusive jurisdiction to determine whether a director is entitled to the inspection sought. The Court may summarily order the Corporation to permit the director to inspect any and all books and records, the stock ledger, and the stock list and to make copies or extracts therefrom. The Court may, in its discretion, prescribe any limitations or conditions with reference to the inspection, or award such other and further relief as the Court may deem just and proper.

7.3 ANNUAL STATEMENT TO STOCKHOLDERS.

The Board of Directors shall present at each annual meeting, and at any special meeting of the stockholders when called for by vote of the stockholders, a full and clear statement of the business and condition of the Corporation.

ARTICLE VIII

GENERAL MATTERS

8.1 CHECKS.

From time to time, the Board of Directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the Corporation, and only the persons so authorized shall sign or endorse those instruments.

8.2 EXECUTION OF CORPORATE CONTRACTS AND INSTRUMENTS.

The Board of Directors, except as otherwise provided in these Bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the Corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the Corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

8.3 STOCK CERTIFICATES; PARTLY PAID SHARES.

The shares of the Corporation shall be represented by certificates, provided that the Board of Directors of the Corporation may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. Notwithstanding the adoption of such a resolution by the Board of Directors, every holder of stock represented by certificates and upon request every holder of uncertificated shares shall be entitled to have a certificate signed by, or in the name of the Corporation by the chairperson or vice-Chairperson of the Board of Directors, or the chief executive officer or the president or vice-president, and by the chief financial officer or an assistant treasurer, or the secretary or an assistant secretary of the Corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if he or she were such officer, transfer agent or registrar at the date of issue.

The Corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, upon the books and records of the Corporation in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the Corporation shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

8.4 SPECIAL DESIGNATION ON CERTIFICATES.

If the Corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the Corporation shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the General Corporation Law of Delaware, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the Corporation shall issue to represent such class or series of stock a statement that the Corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

8.5 LOST CERTIFICATES.

Except as provided in this Section 8.5, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the Corporation and canceled at the same time. The Corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate previously issued by it, alleged to have been lost, stolen or destroyed, and the Corporation may require the owner of the lost, stolen or destroyed certificate, or the owner's legal representative, to give the Corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

8.6 CONSTRUCTION; DEFINITIONS.

Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the Delaware General Corporation Law shall govern the construction of these Bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both a corporation and a natural person.

8.7 DIVIDENDS.

The directors of the Corporation, subject to any restrictions contained in (a) the General Corporation Law of Delaware or (b) the Certificate of Incorporation, may declare and pay dividends upon the shares of its capital stock. Dividends may be paid in cash, in property, or in shares of the Corporation's capital stock.

The directors of the Corporation may set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the Corporation, and meeting contingencies.

8.8 FISCAL YEAR.

The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors and may be changed by the Board of Directors.

8.9 SEAL.

The Corporation may adopt a corporate seal, which may be altered at pleasure, and may use the same by causing it or a facsimile thereof, to be impressed or affixed or in any other manner reproduced.

8.10 TRANSFER OF STOCK.

Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the Corporation to issue a new certificate to the person entitled thereto, cancel the old certificate, and record the transaction in its books.

8.11 STOCK TRANSFER AGREEMENTS.

The Corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the Corporation to restrict the transfer of shares of stock of the Corporation of any one or more classes owned by such stockholders in any manner not prohibited by the General Corporation Law of Delaware.

8.12 REGISTERED STOCKHOLDERS.

The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner, shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

8.13 EXCLUSIVE FORUM PROVISION

Unless the Corporation consents in writing to the selection of an alternative forum (an “Alternative Forum Consent”), the Delaware Court of Chancery shall be the sole and exclusive forum for, and shall have exclusive jurisdiction with respect to, (a) any derivative action or proceeding brought on behalf of the Corporation, (b) any action asserting a claim of breach of a fiduciary duty owed by any current or former director, officer, stockholder, employee or agent of the Corporation to the Corporation or the Corporation’s stockholders, including a claim alleging the aiding and abetting of such a breach of fiduciary duty, (c) any action asserting a claim against the Corporation or any current or former director, officer, stockholder, employee or agent of the Corporation arising out of or relating to any provision of the General Corporation Law of Delaware, the Certificate of Incorporation or these Bylaws, (d) any action asserting a claim related to or involving the Corporation or any director, officer, stockholder, employee or agent of the Corporation that is governed by the internal affairs doctrine of the State of Delaware, or (e) any action asserting an “internal corporate claim” as that term is defined in Section 115 of the General Corporation Law of Delaware; provided, however, that, in the event that the Delaware Court of Chancery lacks subject matter jurisdiction over any such action or proceeding, the sole and exclusive forum for such action or proceeding shall be another state or federal court located within the State of Delaware. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the Corporation shall be deemed to have notice of and consented to the provisions of this Section 8.13. If any action, the subject matter of which is within the scope of this Section 8.13, is filed in a court other than the Delaware Court of Chancery (or any other state or federal court located within the State of Delaware, as applicable) (a “Foreign Action”) by or in the name of any stockholder, such stockholder shall be deemed to have notice of and consented to (i) the exclusive personal jurisdiction of the Delaware Court of Chancery (or such other state or federal court located within the State of Delaware, as applicable) in connection with any action brought in any such court to enforce this Section 8.13 and (ii) having service of process made upon such stockholder in any such action by service upon such stockholder’s counsel in the Foreign Action as agent for such stockholder. The existence of any prior Alternative Forum Consent shall not act as a waiver of the Corporation’s ongoing consent right as set forth above in this Section 8.13 with respect to any current or future actions or claims. Failure to enforce the foregoing provisions would cause the Corporation irreparable harm and the Corporation shall be entitled to equitable relief, including injunctive relief and specific performance, to enforce the foregoing provisions. If stockholders do not ratify this Section 8.13 at the 2020 Annual Meeting of Stockholders of the Corporation, this provision shall thereafter be of no force or effect.

ARTICLE IX

AMENDMENTS

The Bylaws of the Corporation may be adopted, amended or repealed by the stockholders entitled to vote, as specified in the Certificate of Incorporation; provided, however, that the Corporation may, in its Certificate of Incorporation, confer the power to adopt, amend or repeal Bylaws upon the directors. The fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal Bylaws.

News Release

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PDF Solutions® Reports First Fiscal Quarter Results

SANTA CLARA, Calif. — May 1, 2019 — PDF Solutions, Inc. (“PDF Solutions” or the “Company”) (NASDAQ: PDFS), a leading provider of differentiated data and analytics solutions to the semiconductor and electronics industries, today announced financial results for its first fiscal quarter ended March 31, 2019.

First Fiscal Quarter 2019 Financial Results

Total revenues for the first fiscal quarter of 2019 were \$20.5 million, up 4% from \$19.7 million for the fourth fiscal quarter of 2018 and down 17% from \$24.7 million for the first fiscal quarter of 2018. Solutions revenue for the first fiscal quarter of 2019 was \$16.7 million, up 32% from \$12.7 million for the fourth fiscal quarter of 2018 and down 8% from \$18.2 million for the first fiscal quarter of 2018. Gainshare performance incentives revenue for the first fiscal quarter of 2019 was \$3.9 million, down 45% from \$7.1 million for the fourth fiscal quarter of 2018 and down 41% from \$6.5 million for the first fiscal quarter of 2018.

First quarter 2019 gross margin of 62% improved from 54% compared to the first fiscal quarter of 2018, reflecting the impact of the evolution of the Company’s business model to deliver its solutions via high margin, recurring software subscriptions.

On a GAAP basis, net loss for the first fiscal quarter of 2019 was \$2.7 million, or (\$0.08) per basic and diluted share, compared to net loss of \$3.1 million, or (\$0.10) per basic and diluted share, for the fourth fiscal quarter of 2018, and compared to net loss of \$0.4 million, or (\$0.01) per basic and diluted share, for the first fiscal quarter of 2018.

Non-GAAP net income for the first fiscal quarter of 2019 was \$0.8 million, or \$0.03 per diluted share, compared to net loss of \$0.4 million, or (\$0.01) per diluted share, for the fourth fiscal quarter of 2018, and compared to net income of \$2.2 million, or \$0.07 per diluted share, for the first fiscal quarter of 2018.

Cash and cash equivalents at March 31, 2019, were \$90.4 million, compared to \$96.1 million at December 31, 2018.

In connection with the Company’s previously announced stock repurchase program, the Company repurchased approximately 314,000 shares at an average price of \$12.46 per share for a total of \$3.9 million during the first fiscal quarter of 2019.

Operating Highlights

- Acquired the assets of StreamMosaic, Inc., a privately-held provider of AI and ML to the semiconductor market;
- Commercially deployed the new pdFasTest® F380+ at a key customer, which provides improved test capabilities for companies designing and manufacturing emerging memories (PCM, MRAM and ReRAM);
- Finalized plans with a major Asian fabless company to include DFI instrumentation on an advanced node design;

- Closed multiple million-dollar Exensio® Yield and Control contracts at key semiconductor companies in North America, Europe, and at a Top-5 Asian foundry, in one instance displacing a major commercial competitor;
- Entered into several Big Data analytics pilot projects at Top-20 semiconductor companies in North America and Japan; and
- Completed a major contract extension with a leading fabless company to bring up a product at an advanced node in a new foundry.

Conference Call

As previously announced, PDF Solutions will discuss these results on a live conference call beginning at 2:00 p.m. Pacific Time/5:00 p.m. Eastern Time today. The call will be simultaneously web cast on PDF Solutions' website at <http://ir.pdf.com/webcasts>. A replay of the web cast will be available at the same website address beginning approximately two hours after completion of the live call. A copy of this press release, including the disclosure and reconciliation of certain non-GAAP financial measures to the comparable GAAP measures, which non-GAAP measures may be used periodically by PDF Solutions' management when discussing financial results with investors and analysts, will also be available on PDF Solutions' website at <http://www.pdf.com/press-releases> following the date of this release.

First Fiscal Quarter 2019 Financial Commentary Available Online

A Management Report reviewing the Company's first fiscal year 2019 financial results will be furnished to the SEC on Form 8-K and published on the Company's website at <http://ir.pdf.com/financial-reports>. Analysts and investors are encouraged to review this commentary prior to participating in the conference call webcast.

Information Regarding Use of Non-GAAP Financial Measures

In addition to providing results that are determined in accordance with Generally Accepted Accounting Principles in the United States of America (GAAP), PDF Solutions also provides certain non-GAAP financial measures. Non-GAAP net income (loss) excludes the effects of non-recurring items (including severance payments, restructuring charges, write-down in value of property and equipment, and adjustment to contingent consideration related to acquisition), stock-based compensation expense, amortization of acquired technology and other acquired intangible assets, and their related income tax effects, as applicable, as well as adjusts for the non-cash portion of income taxes. These non-GAAP financial measures are used by management internally to measure the Company's profitability and performance. PDF Solutions' management believes that these non-GAAP measures provide useful supplemental information to investors regarding the Company's ongoing operations in light of the fact that none of these categories of expense has a current effect on the future uses of cash (with the exception of certain non-recurring items) nor do they impact the generation of current or future revenues. These non-GAAP results should not be considered an alternative to, or a substitute for, GAAP financial information, and may differ from similarly titled non-GAAP measures used by other companies. In particular, these non-GAAP financial measures are not a substitute for GAAP measures of income or loss as a measure of performance, or to cash flows from operating, investing and financing activities as a measure of liquidity. Since management uses these non-GAAP financial measures internally to measure profitability and performance, PDF Solutions has included these non-GAAP measures to give investors an opportunity to see the Company's financial results as viewed by management. A reconciliation of the comparable GAAP financial measures to the non-GAAP financial measures is provided at the end of the Company's financial statements presented below.

Forward-Looking Statements

The statements made in this press release and on the planned conference call regarding the Company's future expected business performance and financial results are forward looking and are subject to events and circumstances of the future. Actual results could differ materially from those expressed in these forward-looking statements. Risks and uncertainties that could cause results to differ materially include risks associated with: customers' production volumes under contracts that provide Gainshare royalties, cost and schedule of new product development; continued adoption of the Company's solutions by new and existing customers; project milestones or delays and performance criteria achieved; the provision of technology and services prior to the execution of a final contract; and other risks set forth in PDF Solutions' periodic public filings with the Securities and Exchange Commission, including, without limitation, its Annual Reports on Form 10-K, most recently filed for the year ended December 31, 2018, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K and amendments to such reports. The forward-looking statements made in the conference call are made as of the date hereof, and PDF Solutions does not assume any obligation to update such statements nor the reasons why actual results could differ materially from those projected in such statements.

About PDF Solutions

PDF Solutions (NASDAQ: PDFS) offers an end-to-end analytics platform that empowers engineers and data scientists across the semiconductor ecosystem to rapidly improve the yield, quality, and profitability of their products. By combining industry-leading data analytics and professional services with exclusive, differentiated product data generated during the manufacturing process, PDF Solutions is delivering on the promise of Industry 4.0 today by transforming how the ecosystem collects, analyzes, and shares data. Key Fortune 500 organizations around the world rely on PDF Solutions to remove the data barriers that encumber and constrain new product introductions and to deliver the machine learning insights that drive efficient and profitable high-volume manufacturing.

Headquartered in Santa Clara, California, PDF Solutions also operates worldwide in Canada, China, France, Germany, Italy, Japan, Korea, and Taiwan. For the Company's latest news and information, visit <http://www.pdf.com/>.

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PDF SOLUTIONS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)
(In thousands)

	<u>March 31,</u> <u>2019</u>	<u>December 31,</u> <u>2018</u>
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 90,415	\$ 96,089
Accounts receivable, net	53,211	51,570
Prepaid expenses and other current assets	9,862	9,562
Total current assets	<u>153,488</u>	<u>157,221</u>
Property and equipment, net	35,936	35,681
Operating lease right-of-use assets, net	8,339	—
Goodwill	1,923	1,923
Intangible assets, net	4,812	5,064
Deferred tax assets	21,099	19,044
Other non-current assets	7,088	6,972
Total assets	<u>\$ 232,685</u>	<u>\$ 225,905</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 2,522	\$ 2,454
Accrued compensation and related benefits	4,256	4,727
Accrued and other current liabilities	2,801	3,235
Operating lease liabilities - current portion	1,914	—
Deferred revenues - current portion	9,220	8,477
Billings in excess of recognized revenues	1,529	635
Total current liabilities	<u>22,242</u>	<u>19,528</u>
Long-term income taxes payable	3,898	3,751
Non-current operating lease liabilities	8,464	—
Other non-current liabilities	734	2,831
Total liabilities	<u>35,338</u>	<u>26,110</u>
Stockholders' equity:		
Common stock and additional paid-in-capital	315,434	310,665
Treasury stock at cost	(83,616)	(79,142)
Accumulated deficit	(33,143)	(30,452)
Accumulated other comprehensive loss	(1,328)	(1,276)
Total stockholders' equity	<u>197,347</u>	<u>199,795</u>
Total liabilities and stockholders' equity	<u>\$ 232,685</u>	<u>\$ 225,905</u>

PDF SOLUTIONS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)
(In thousands, except per share amounts)

	Three months ended		
	March 31, 2019	December 31, 2018	March 31, 2018
Revenues:			
Solutions	\$ 16,661	\$ 12,650	\$ 18,190
Gainshare performance incentives	3,880	7,075	6,547
Total revenues	<u>20,541</u>	<u>19,725</u>	<u>24,737</u>
Cost of Solutions Revenue:			
Direct costs of solutions revenue	7,723	9,577	11,338
Amortization of acquired technology	144	144	144
Total cost of solutions revenue	<u>7,867</u>	<u>9,721</u>	<u>11,482</u>
Gross profit	12,674	10,004	13,255
Operating expenses:			
Research and development	8,246	6,898	7,245
Selling, general and administrative	7,011	6,133	6,375
Amortization of other acquired intangible assets	108	109	109
Restructuring charges	92	576	—
Total operating expenses	<u>15,457</u>	<u>13,716</u>	<u>13,729</u>
Loss from operations	(2,783)	(3,712)	(474)
Interest and other income (expense), net	(6)	210	(331)
Loss before income taxes	(2,789)	(3,502)	(805)
Income tax benefit	(98)	(388)	(381)
Net loss	<u>\$ (2,691)</u>	<u>\$ (3,114)</u>	<u>\$ (424)</u>
Net loss per share:			
Basic	<u>\$ (0.08)</u>	<u>\$ (0.10)</u>	<u>\$ (0.01)</u>
Diluted	<u>\$ (0.08)</u>	<u>\$ (0.10)</u>	<u>\$ (0.01)</u>
Weighted average common shares:			
Basic	32,485	32,306	32,168
Diluted	32,485	32,306	32,168

PDF SOLUTIONS, INC.
RECONCILIATION OF GAAP TO NON-GAAP NET INCOME (LOSS) (UNAUDITED)
(In thousands, except per share amounts)

	Three months ended		
	March 31, 2019	December 31, 2018	March 31, 2018
GAAP net loss	\$ (2,691)	\$ (3,114)	\$ (424)
Adjustments to reconcile GAAP net loss to non-GAAP net income (loss):			
Stock-based compensation expense	3,476	2,470	2,856
Amortization of acquired technology	144	144	144
Amortization of other acquired intangible assets	108	109	109
Restructuring charges and severance payments	92	576	283
Write-down in value of property and equipment	—	227	—
Adjustment to contingent consideration related to acquisition	—	90	—
Tax impact of adjustments	(287)	(868)	(748)
Non-GAAP net income (loss)	<u>\$ 842</u>	<u>\$ (366)</u>	<u>\$ 2,220</u>
GAAP net loss per diluted share	<u>\$ (0.08)</u>	<u>\$ (0.10)</u>	<u>\$ (0.01)</u>
Non-GAAP net income (loss) per diluted share	<u>\$ 0.03</u>	<u>\$ (0.01)</u>	<u>\$ 0.07</u>
Shares used in diluted shares calculation	<u>33,022</u>	<u>32,476</u>	<u>32,645</u>



2019 Q1
Management Report

May 1, 2019



Contents

■ 2019 Q1 Results

- Overview
- Revenue Detail
- Key Financial & Operating Metrics

■ 2019 Q1 Non-GAAP Results

- Reconciliation of GAAP to Non-GAAP Net Income
- Reconciliation of GAAP to Non-GAAP Spending by Function

■ Related Information

The following commentary is provided by management and should be referenced in conjunction with PDF Solutions' first quarter for fiscal year 2019 financial results press release available on its Investor Relations website at <http://www.pdf.com/financial-news>. These remarks represent management's current views of the Company's financial and operational performance and are provided to give investors and analysts further insight into its performance in advance of the earnings call webcast. The Company disclaims any duty to update this information for future events.

Q1 2019 Key Metrics

Revenue: \$20.5M

GAAP Gross margin: 62%

Non-GAAP Gross margin: 67%

GAAP EPS: (\$0.08)

Non-GAAP EPS: \$0.03

Operating Cash Flow: (\$0.2M)

Capital Expenditures: \$2.4M

FINANCIAL RESULTS SUMMARY

- Total revenues for the first fiscal quarter of 2019 were \$20.5 million, up 4% from \$19.7 million for the fourth fiscal quarter of 2018.
- Solutions revenue for the first fiscal quarter of 2019 was \$16.7 million, up 32% from \$12.7 million for the fourth fiscal quarter of 2018.
- Gainshare performance incentives revenue for the first fiscal quarter of 2019 was \$3.9 million, down 45% from \$7.1 million for the fourth fiscal quarter of 2018.

Revenue Detail – Quarterly Q1 2018 Through Q1 2019

Revenue by Type

	<u>Q1'18</u>	<u>Q2'18</u>	<u>Q3'18</u>	<u>Q4'18</u>	<u>Q1'19</u>
Solutions Revenue	\$18,190	\$15,266	\$13,976	\$12,650	\$16,661
% of Total	74%	72%	69%	64%	81%
Gainshare performance	\$6,547	\$5,853	\$6,237	\$7,075	\$3,880
% of Total	26%	28%	31%	36%	19%
Total revenues	\$24,737	\$21,119	\$20,213	\$19,725	\$20,541
GAAP Gross Margin	54%	48%	47%	51%	62%
Non-GAAP Gross Margin	59%	54%	52%	55%	67%

Revenue by Geography

	<u>Q1'18</u>	<u>Q2'18</u>	<u>Q3'18</u>	<u>Q4'18</u>	<u>Q1'19</u>
North America (US/Canada)	10.1M	9.1M	8.4M	6.8M	9.3M
% of Total	41%	42%	41%	34%	45%
Europe	3.8M	3.4M	2.8M	3.1M	3.6M
% of Total	15%	16%	14%	16%	18%
APAC	10.8M	8.6M	9.0M	9.8M	7.6M
% of Total	44%	41%	44%	50%	37%
Total revenues	\$24.7M	\$21.1M	\$20.2M	\$19.7M	\$20.5M

Recent Accomplishments

Operating Highlights

- Acquired the assets of StreamMosaic, Inc., a privately-held provider of AI and ML to the semiconductor market;
- Commercially deployed the new pdfFasTest® F380+ at a key customer, which provides improved test capabilities for companies designing and manufacturing emerging memories (PCM, MRAM and ReRAM);
- Finalized plans with a major Asian fabless company to include DFI instrumentation on an advanced node design;
- Closed multiple million-dollar Exensio® Yield and Control contracts at key semiconductor companies in North America, Europe, and at a Top-5 Asian foundry, in one instance displacing a major commercial competitor;
- Entered into several Big Data analytics pilot projects at Top-20 semiconductor companies in North America and Japan; and
- Completed a major contract extension with a leading fabless company to bring up a product at an advanced node in a new foundry.



Key Financial & Operating Metrics - Quarterly Q1 2018 Through Q1 2019

Key Financial & Operating Metrics

(in thousands, except share data, which is in millions, and percentages)

	<u>Q1'18</u>	<u>Q2'18</u>	<u>Q3'18</u>	<u>Q4'18</u>	<u>Q1'19</u>
Revenue	\$24,737	\$21,119	\$20,213	\$19,725	\$20,541
GAAP Gross Margin	54%	48%	47%	51%	62%
Non-GAAP Gross Margin	59%	54%	52%	55%	67%
Outstanding Debt	\$0	\$0	\$0	\$0	\$0
Operating Cash Flow	\$3,252	\$6,467	(\$676)	\$4,295	(\$151)
Capital Expenditures (CAPEX)	\$2,447	\$2,363	\$3,937	\$4,369	\$2,357
\$ Shares Repurchased	\$4,123	\$1,126	\$0	\$0	\$3,916
Days Sales Outstanding (DSO)	127	131	135	135	150
Avg. Weighted Shares Out	32.2	32.0	32.2	32.3	32.5
Effective Tax Rate	47%	17%	21%	11%	4%

GAAP / Non-GAAP Presentation

In addition to providing results that are determined in accordance with Generally Accepted Accounting Principles in the United States of America (GAAP), the Company also provides certain non-GAAP financial measures. Non-GAAP net income (loss) excludes the effects of non-recurring items (including severance payments, restructuring charges, write-down in value of property and equipment, and adjustment to contingent consideration related to acquisition), stock-based compensation expenses, amortization of acquired technology and other acquired intangible assets, and their related income tax effects, as applicable, as well as adjusts for the non-cash portion of income taxes. These non-GAAP financial measures are used by management internally to measure the Company's profitability and performance. PDF Solutions' management believes that these non-GAAP measures provide useful supplemental measures to investors regarding the Company's ongoing operations in light of the fact that none of these categories of expense has a current effect on the future uses of cash (with the exception of certain non-recurring items) nor do they impact the generation of current or future revenues. These non-GAAP results should not be considered an alternative to, or a substitute for, GAAP financial information, and may be different from similarly titled non-GAAP measures used by other companies. In particular, these non-GAAP financial measures are not a substitute for GAAP measures of income or loss as a measure of performance, or to cash flows from operating, investing and financing activities as a measure of liquidity. Management uses these non-GAAP financial measures internally to measure profitability and performance; these non-GAAP measures are presented here to give investors an opportunity to see the Company's financial results as viewed by management. A detailed reconciliation of the adjustments made to comparable GAAP measures is included herein.

Reconciliation of GAAP to Non-GAAP Net Income (Loss)

(in thousands, except for shares and per share amounts)

	<u>Q1'18</u>	<u>Q2'18</u>	<u>Q3'18</u>	<u>Q4'18</u>	<u>Q1'19</u>
GAAP net loss	(424)	(2,096)	(2,082)	\$ (3,114)	\$ (2,691)
Adjustments to reconcile GAAP net loss to non-GAAP net income (loss):					
Stock-based compensation expense	2,856	2,701	2,268	2,470	3,476
Amortization of acquired technology	144	143	144	144	144
Amortization of other acquired intangible assets	109	108	108	109	108
Restructuring charges and severance payment	283	—	48	576	92
Write-down in value of property and equipment	—	—	—	227	—
Adjustment to contingent consideration related to acquisition	—	—	—	90	—
Tax impact of adjustments	(748)	(96)	(281)	(868)	(287)
Non-GAAP net income (loss)	2,220	760	205	\$ (366)	842
GAAP net loss per diluted share	\$ (0.01)	\$ (0.07)	\$ (0.06)	\$ (0.10)	\$ (0.08)
Non-GAAP net income (loss) per diluted share	\$ 0.07	\$ 0.02	\$ 0.01	\$ (0.01)	\$ 0.03
Shares used in diluted shares calculation	32,645	32,304	32,385	\$ 32,476	33,022

Reconciliation of GAAP to Non-GAAP Spending by Function

(in thousands)

	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19
Cost of Solutions - GAAP	\$ 11,482	\$ 10,917	\$ 10,683	\$ 9,721	\$ 7,867
Adjustments to reconcile GAAP Cost of Solutions to non-GAAP Cost of Solutions:					
Stock-based compensation expense	(1,013)	(968)	(787)	(786)	(860)
Amortization of acquired technology	(144)	(144)	(144)	(144)	(144)
Severance payments	(209)	—	(48)	—	—
Cost of Solutions - Non-GAAP	\$ 10,116	\$ 9,805	\$ 9,705	\$ 8,791	\$ 6,863
Research & Development - GAAP	\$ 7,245	\$ 7,100	\$ 6,755	\$ 6,898	\$ 8,246
Adjustments to reconcile GAAP R&D to non-GAAP R&D:					
Stock-based compensation expense	(879)	(845)	(725)	(811)	(1,718)
Severance payments	(74)	—	—	—	—
Write-down in value of property and equipment	—	—	—	(227)	—
Adjustment to contingent consideration related to acquisition	—	—	—	(90)	—
Research & Development - Non-GAAP	\$ 6,292	\$ 6,255	\$ 6,030	\$ 5,770	\$ 6,528
Selling, General, & Administrative - GAAP	\$ 6,375	\$ 5,919	\$ 5,507	\$ 6,133	\$ 7,011
Adjustments to reconcile GAAP SG&A to non-GAAP SG&A:					
Stock-based compensation expense	(963)	(888)	(756)	(873)	(898)
Selling, General, & Administrative - Non-GAAP	\$ 5,412	\$ 5,031	\$ 4,751	\$ 5,260	\$ 6,113





PDF Solutions to Enhance Big Data Analytics Platform with Acquisition of Assets from StreamMosaic

Production-Proven Machine Learning Already in Use at a Top-10 Fabless Company

Santa Clara, CA, May 1, 2019 – PDF Solutions, Inc. (Nasdaq: PDFS) announced the acquisition of certain assets, including all related IP, from StreamMosaic, Inc., a privately-held provider of artificial intelligence (AI) and machine learning (ML) solutions for the semiconductor industry. The addition of StreamMosaic’s products will enhance the company’s leading position in advanced data analytics for semiconductors and electronics by broadening its product offering and expanding its customer reach.

Industry 4.0 promises significant improvements in efficiency by harnessing advances in analytics, machine learning and edge-to-cloud computing. Virtually every semiconductor company is collecting terabytes of manufacturing and test data, but data silos, data inconsistency, and weak data infrastructures limit the value and insights derived from that data.

“StreamMosaic has pioneered AI and ML solutions specifically for the semiconductor industry and has been successfully deployed in high-volume production,” said Jeffrey David, president and founder of StreamMosaic, Inc. “The StreamMosaic team is excited to join an organization that shares our vision to improve efficiency, performance, and yield across the semiconductor industry through the application of AI and ML technology.”

“Advanced analytics is now a mission-critical requirement for success in the semiconductor industry, and PDF Solutions is committed to delivering best-in-class AI and ML solutions to our customers,” said Said Akar, vice president and general manager of Volume Manufacturing Solutions at PDF Solutions. “Customers who use our Exensio platform to collect and manage their manufacturing and test data will now be able to enhance their analytics capabilities with the robust AI and ML solutions developed by StreamMosaic to further improve product yield, quality, and performance.”

StreamMosaic products are now available through the PDF Solutions sales channels worldwide. For product inquiries email sales@pdf.com.

About PDF Solutions

PDF Solutions (NASDAQ: PDFS) offers an end-to-end analytics platform that empowers engineers and data scientists across the semiconductor ecosystem to rapidly improve the yield, quality, and profitability of their products. By combining industry-leading data analytics and professional services with exclusive, differentiated product data generated during the manufacturing process, PDF Solutions is delivering on the promise of Industry 4.0 today by transforming how the ecosystem collects, analyzes, and shares data. Key Fortune 500 organizations around the world rely on PDF Solutions to remove the data barriers that encumber and constrain new product introductions and to deliver the machine learning insights that drive efficient and profitable high-volume manufacturing.



Headquartered in Santa Clara, California, PDF Solutions also operates worldwide in Canada, China, France, Germany, Italy, Japan, Korea, and Taiwan. For the Company's latest news and information, visit <http://www.pdf.com>

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