FINAL FOR

ADOPTION BY

FIBER OPTIC SENSING ASSOCIATION CHAPTER

AND

APPROVAL BY

FTTH COUNCIL D/B/A

FIBER BROADBAND ASSOCIATION

BOARD OF DIRECTORS

Charter/Bylaws of the Fiber Optic Sensing Association Chapter

of the FTTH Council d/b/a Fiber Broadband Association

April, 2017

ARTICLE 1 - PURPOSE AND OBJECTIVES

- 1.1 The name of the Chapter is the Fiber Optic Sensing Association ("FOSA"), a Chapter of the FTTH Council d/b/a Fiber Broadband Association ("FBA").
- 1.2 The FOSA Chapter is a subsidiary of the FBA and exists to serve its members and enhance the FBA's Mission of accelerating the deployment of fiber optic networks in the industry sector dedicated to the deployment and use of fiber optic sensing technologies.
- 1.3 The FOSA Chapter shall follow the FBA's Mission and its Resolutions on the status, structure, and operations of a Chapter, including the Resolution adopted by the FBA's Board of Directors in December, 2013 and any amendments thereto. The FOSA Chapter and the Members of the Chapter

("Members") shall act consistent with the Bylaws of the FBA to the extent relevant, including by (a) not engaging in any act or thing that would cause the FBA to engage in any activity not permitted by a corporation qualified under Section 501(c)(6) of the United States Internal Revenue Code, as amended and (b) complying strictly with all applicable antitrust laws.

1.4 The FOSA Chapter shall not obligate the FBA without consent of the President of the FBA or the FBA's Board of Directors.

ARTICLE 2 – CONTACTS

2.1 The primary contact for the FOSA Chapter shall be the Chair of the FOSA Chapter Board of Directors ("Chair"). The FOSA Chapter Board of Directors ("Board of Directors") may select new or additional contacts and shall inform the FBA if that occurs.

ARTICLE 3 – MEMBERSHIP

3.1 Membership Candidates

- (a) Any firm, partnership, corporation, unincorporated association, or other business entity ("Business Entity") supporting the purposes of the FOSA Chapter may apply for membership in the FOSA Chapter and, unless rejected pursuant to Section 3.2 herein, shall become a Member. The FOSA Chapter does not restrict membership on the basis of age, disability, sex, gender reassignment, pregnancy, maternity, race (which includes color, nationality and ethnic or national origins), sexual orientation, religion or belief, or because someone is married or in a civil partnership..
- (b) "Affiliation" for purposes of this Charter is: ownership or control by an existing Member of more than fifty percent (50%) of the voting stock (or similar rights of control) of the applicant; ownership or control of more than fifty percent (50%) of the voting stock (or similar rights of control) of an existing Member by the applicant; or common control of more than fifty percent (50%) of the voting stock (or similar rights of control) of an existing Member and the applicant.

3.2 Qualifications and Rights

- (a) The FOSA Chapter shall initially have only Platinum Members. The Board of Directors may create other classes of members that will not have voting privileges and access to all working documents of FOSA and its Committees. An applicant to become a Member automatically shall become a Member unless the Chair, in his or her sole discretion, rejects its application within 90 days of submission. The qualifications and fees for each class of Members shall be determined by the Board of Directors.
- (b) Each Platinum Member shall be entitled to one (1) vote at all annual, special, and quarterly meetings of the Members. Each Platinum Member shall designate one (1)

individual and one (1) alternate individual entitled to vote on its behalf at such meetings, and shall submit the names of such individuals to the Chair (each an "Authorized Voter").

3.2.1 Platinum Membership

- (a) Any Business Entity may apply to be a Platinum Member in the FOSA Chapter. An applicant for membership that is affiliated with an existing Platinum Member will not be permitted to be a Platinum Member but is eligible to be another class of member.
- (b) The Board of Directors shall determine the number of representatives of each Platinum Member who can participate in any working committee, special committee, or general meeting of the FOSA Chapter. Each Platinum Member shall have access to all working documents, minutes of meetings (Board of Directors and committees), and written contributions by the FOSA Chapter.
- (c) The Authorized Voter for each Platinum Member shall be entitled to one (1) vote at each annual, quarterly, and special meeting of the Members.

3.3 Admission to Membership

An applicant shall submit to the FBA an application for admission to membership in the FOSA Chapter and an executed Membership Agreement (the "Membership Documents"), each in a manner and form prescribed by the FBA's Board of Directors. Upon the FBA's receipt from the applicant of such Membership Documents and the first annual dues payment, the applicant automatically shall become a Member and shall remain a Member unless the Chair exercises the rights under Section 3.2(a) or until the occurrence of any of the events set forth in Section 3.4.

3.4 Term of Membership. The term of any membership shall be perpetual, unless a shorter term shall be specified by the Board of Directors, or unless the Member resigns, withdraws from business, is suspended, or is expelled, as provided below. If a Member is acquired by another entity, the acquiring entity shall become the Member subject to the terms of the FOSA Charter/Bylaws.

3.5 Dues

- (a) Each Member shall pay annual dues to the FOSA Chapter according to schedules (which shall include the amount of the annual dues and the date ("Due Date") when such dues must be received by the FOSA Chapter) prescribed by the Board of Directors and reported to the Members at the annual meeting or in some other written form.
- (b) A Member shall be in default if its dues have not been received within 60 days of the applicable Due Date. If Member is in default of its obligation to pay dues, its membership shall be suspended immediately and shall not be reinstated until the default is cured.

3.6 Special Assessments

• (a) The Board of Directors, after providing notice to the Members and upon a vote by at

least 8 (eight) Directors, may raise monies by special assessments to pay unusual or extraordinary expenses of the FOSA Chapter. Each Member only shall be obligated to pay its *pro rata* share of any such special general assessment. The Board of Directors shall not levy special assessments, which, in any fiscal year, cumulatively exceed fifty percent (50%) of the annual dues of all Members except upon the resolution of a majority of voting Members; provided, however, no special assessment with respect to a resolution or a series of resolutions shall exceed two (2) times the annual dues within a fiscal year. Within 45 days after any special assessment has been levied, notice thereof shall be given to each and every Member of the FOSA Chapter stating the amount of such assessment and the Due Date(s) for payment. The default provisions set forth in Section 3.5 shall apply to each Member's payment of any special assessment, except that a Member shall be in default if the applicable special assessment is not paid in full within 90 days after the Due Date.

• (b) No newly elected Member shall be required to pay any special assessment or portion thereof levied prior to the date such Member was admitted to membership in the FOSA Chapter.

3.7 Resignation

Any Member may withdraw from membership by tendering a written resignation to the FOSA Chapter, together with any and all dues and special assessments adopted by the Board of Directors prior to the date of resignation remaining unpaid on the date of tender of resignation.

3.8 Withdrawal from Business

Membership in the FOSA Chapter automatically shall terminate upon bankruptcy of, or withdrawal from, or cessation of business by, any Member or upon such Member ceasing to satisfy the qualifications for membership set forth herein.

3.9 Suspension and Expulsion

• (a) Any Member which: (i) violates any of the Charter/Bylaws or documented procedures or resolutions adopted by the Board of Directors; or (ii) in the Board of Director's sole judgment, engages in any other conduct detrimental to the FOSA Chapter, shall, by a two-thirds vote of the Board of Directors present at any meeting where a quorum exists, be subject to suspension, expulsion, or any other sanction approved by the Board of Directors. Expulsion or suspension for any reason other than non-payment of dues or special assessments shall occur only after the affected Member has been advised, at least 15 days in advance, in writing of the proposed expulsion or suspension and the reasons therefor, and has been given an opportunity to submit, not less than five (5) days in advance, to the Board of Directors, the reasons in support of its continued membership in the FOSA Chapter. The notice to the affected Member shall include the name and address of the individual or

FOSA Chapter making the charge (if any) and a concise statement of the material facts constituting the charge. If the Board of Directors determines, in good faith, that the allegations are substantiated, the Board of Directors shall, by a two-thirds vote of its members present at any meeting where a quorum exists, impose appropriate sanctions. The decision of the Board of Directors concerning an expulsion or a suspension shall be final and binding.

• (b) Any suspended Member still is obligated to pay any dues or special assessments by the applicable Due Date, even if such Due Date occurs during the period of suspension. Any expelled Member shall forfeit all previously paid dues or special assessments. No Member which has been expelled shall be eligible for admission to membership for at least one (1) year from the date of expulsion and, notwithstanding Section 3.2 to the contrary herein, admission only shall be permitted upon a majority vote of the Board of Directors.

3.10 Property Rights

- (a) All patents, copyrights, or other intellectual property owned or created by any Member outside this FOSA Chapter or its work shall remain the property of that Member, and such ownership and rights shall not be affected in any way by the Member's participation in this FOSA Chapter unless the Member otherwise specifically agrees in writing. All Member-owned material presented by a Member to the FOSA Chapter, including its various committees, shall be deemed to be non-confidential and available for public distribution unless otherwise specified in writing at the time of the presentation by the Member. All materials written or prepared by any Member for this FOSA Chapter shall be the property of the FOSA Chapter, and the FOSA Chapter shall own all rights in and to such materials, including, but not limited to, the copyright therein.
- (b) The FOSA Chapter may publish documents to promote its objects and purposes. Employees of Members may be cited as co-authors when appropriate.

ARTICLE 4 – MEETINGS OF MEMBERS

4.1 Annual and Other Meetings

The annual and other meetings of the Members of the FOSA Chapter, at the direction of the Board of Directors, may be held on such date and time and at such place as shall be designated by the Board of Directors and stated in the notice of the meeting. At the annual meeting, the Members shall nominate and elect a sufficient number of Directors to replace all Directors whose terms are expiring, and shall transact such other business as may properly come before the meeting, provided that the Members shall take no action that in any way obligates the FBA to expend funds or perform acts, including by contractual obligation, or is otherwise inconsistent with obligations of the FBA

unless it is approved by the Chair of the FBA (or designee) ("Chair") and President of the FBA. The Chair (or designee) and President of the FBA shall have sole authority to determine when such obligations by may be incurred. Minutes of any annual or other meeting will be kept and archived by the Secretary of the FOSA Chapter or by his or her designee.

4.2 Special Meetings

Special meetings of the Members of the FOSA Chapter may be called by the Chair or by not less than five percent (5%) of the Platinum Members of the FOSA Chapter. A special meeting called by any Platinum Member entitled to call a meeting shall be called by written request, specifying the business proposed to be transacted, and submitted to the Chair. The Chair then shall cause notice to be given promptly to the Members entitled to vote, in accordance with Section 4.3 of this Charter/Bylaws, stating that a meeting will be held at a specified time and date fixed by the Board of Directors. Such meeting date shall be at least ten (10) days after receipt of the request. If such notice is not given within ten (10) days after receipt of the request, the Platinum Member(s) requesting the meeting may give the notice. Nothing in this Section 4.2 shall be construed as limiting, fixing, or affecting the time at which a meeting may be held when the meeting is called by the Chair. No business, other than the business set forth in the notice of the meeting, may be transacted at a special meeting. Minutes of the meeting will be kept and archived by the Secretary of the FOSA Chapter or by his or her designee.

4.3 Notice

Written notice of the time and place and purpose of holding any annual, quarterly, or special meeting shall be given to each Member of this FOSA Chapter which, on the record date of notice, is permitted to attend such a meeting, at least ten (10) days prior to the scheduled date for the meeting. The written notice of a meeting will include the proposed agenda for the meeting. All notices shall be given at the address on file with the FOSA Chapter either personally, or by telecopier, electronic mail, or by first class, registered or certified mail. Notice of a meeting need not be given to any Member which signs a waiver of notice, in person, whether before or after the meeting. The attendance of any Member at a meeting, in person or by telephone, shall constitute a waiver of notice by that Member.

4.4 Quorum and Adjournments

A majority vote of the Authorized Voters of the Platinum Members entitled to vote shall be necessary to constitute a quorum for the transaction of business. If such quorum and the voting requirements set forth in Section 4.5 are not met at any meeting, a majority of the Members present in person shall have the power to adjourn the meeting from time to time without notice other than announcement at the meeting of the time and place to which the meeting is adjourned. No meeting may be adjourned for more than forty-five (45) days.

4.5 Voting

A majority vote of Authorized Voters in good standing is required to pass a resolution of the Members, provided that a quorum is present or otherwise participates. Notwithstanding the foregoing, Directors shall be elected by a majority of the votes cast at an election held during a meeting where a quorum is present. Each Platinum Member shall be entitled to only one (1) vote for each Director position to be filled, but no more than one (1) vote for each Director candidate, and shall have one (1) vote upon any question coming before any meeting of the Members. Voting may be by voice or ballot, except that any election of Directors must be by ballot if so demanded by any voting Member at the meeting before the voting begins. Voting shall be by Authorized Voters who are present at the meeting or by such Authorized Voters via their e-mail received at an e-mail address no later than the date and time specified in the meeting notice.

4.6 Written Consent

4.7

Any action required or permitted to be taken at a meeting of Members may be taken without meeting if all Authorized Voters consent thereto in writing.

Dissolution of FOSA Chapter

The Members may, by a vote of two-thirds of the Members, request that the Board of Directors of the FBA dissolve the Chapter. No dissolution shall occur until approved by the FBA and until the FOSA Chapter and FBA have reached agreement addressing any financial issues, including reimbursement for financial contributions to the FOSA Chapter from the FBA, or any matters under which actions of the FOSA Chapter may cause the FBA to be liable.

ARTICLE 5 – DIRECTORS

5.1 Number and Election

- (a)
- (1) The Board of Directors, using their best efforts, consistent with then applicable regulations, standards and ethical guidelines, shall manage the assets and business of the FOSA Chapter.
- (2) The initial Board of Directors shall be composed of the Chair (or designee) and President of the FBA and representatives of the first nine (9) Platinum Members that have committed to be members and have paid their dues in full. The representatives of the first five (5) Platinum Members committing and paying dues shall have terms expiring on December 31, 2018. The representatives of the next four (4) Platinum members committing and paying dues shall have terms expiring on December 31,

- 2017. When the terms of the initial Directors expire, Directors shall be selected pursuant to Section 5.1(a)(4) and have terms set forth in Section 5.1(a)(5).
- (3) The Board of Directors shall have eleven members (11) members, two of whom shall be the Chair (or designee) and President of the FBA.
- (4) Except as provided in Section 5.1(a)(2), Directors, other than the Chair (or designee) and President of the FBA, shall be elected by a majority vote of the Authorized Voters at an annual meeting or at a special meeting called for such purpose. A run-off election shall be held if two or more individuals receive the same number of votes.
- (5) Except as provided in Section 5.1(a)(2), each Director shall serve for a term of two (2) years, which shall begin on January 1 and end on December 31 of the relevant years.

• (b)

- (1) Directors shall be selected from employees of Platinum Member companies, but no more than one (1) Director may be employed by any single Platinum Member (including any of its Affiliates).
- (2) If a Director's employer ceases to be a Platinum Member in good standing or if the Director's employer is no longer at least affiliated with the Platinum Member, then that Director's position shall be considered vacant.
- (3) If a Director leaves the employment of the Platinum Member with whom he or she was employed at the time of the Director's election or appointment, the Director's position shall be considered vacant.
- (4) If a Director resigns for any reason, the Director's position shall be considered vacant.
- (5) If a Director's employer merges with, is acquired by, or otherwise combines with another entity, the Director may continue to serve on the Board of Directors so long as the post-transaction entity (including any of its Affiliates) is a Platinum Member or, within thirty (30) days from the date of the closing of the transaction, becomes a Platinum Member.
- (6) The Board of Directors may remove Directors "for cause" if the Director has been convicted of a felony. Directors may be removed without cause if such removal is approved by a two-thirds vote of the remaining Board of Directors present at any meeting where a quorum is present.
- (c) Any person eligible to be a Director shall become a candidate for such position either:
 - (i) by submitting an application in the form established by the Board of Directors no later

than ten (10) days prior to any vote for membership thereof; or (ii) by being nominated and seconded by a Platinum Member during such vote.

5.2 Vacancies

Any vacancy on the Board of Directors may be filled by a majority of the Directors. The replacement Director's term shall expire upon the date when the vacating Director's term was scheduled to expire.

5.3 Powers

The Board of Directors shall take no action that in any way obligates the FBA to expend funds or perform acts, including by contractual obligation, or is otherwise inconsistent with obligations of the FBA unless it is approved by the Chair (or designee) and the President of the FBA. The Chair (or designee) and the President of the FBA shall have sole authority to determine when such obligations may be incurred. Consistent with this requirement, the Board of Directors shall have power to:

- (a) Elect all officers and appoint all agents of the FOSA Chapter and prescribe their duties and fix their compensation except as otherwise provided by this Charter/Bylaws.
- (b) Appoint committees.
- (c) Establish dues schedules.
- (d) In general, do all lawful things and exercise all such lawful powers as are not vested in the Members of the FOSA Chapter and which will promote the objects and purposes of this FOSA Chapter.

Annual Budget

The Board of Directors shall by November 30th of each year adopt an approved budget for the subsequent calendar year. The Chair shall submit that budget to the FBA for its approval, and the budget shall take effect only when approved by the FBA's Board of Directors. If the FOSA Chapter seeks any modification of an approved budget, it shall submit a request for modification to the FBA, and such modification shall take effect when approved by the FBA's Board of Directors, which may delegate authority for review and approval to its Finance and Audit Committee.

5.4 Meetings

5.3.1

• (a) The Board of Directors shall meet at least four (4) times annually. Annual meetings of the Board of Directors shall be held for the purpose of organization, the election of officers and the transaction of other business as soon as practicable after each annual election of Directors is held. Such annual meeting may be held at any other time or place specified in a notice given as hereinafter provided for meetings of the Board of Directors, or in a waiver of notice thereof.

- (b) Meetings of the Board of Directors may be called by the Chair on at least four (4) days notice prior to the meeting of the date, time, and place given either personally, by mail, or by electronic transmission with acknowledgment of receipt. In addition, the Chair shall call meetings of the Board of Directors on like notice on the written request of any two (2) members of the Board of Directors.
- (c) Meetings of Board of Directors may be conducted by voice or multimedia conference
 call by which all participants are able to hear all other participants and are able to
 participate fully.
- (d) Notice of any meeting need not be given to a Director who signs a waiver of notice. The attendance of any Director at a meeting without protesting, prior to the conclusion of the meeting, the lack of notice for such meeting, shall constitute a waiver of notice by a Director. Notice of an adjourned meeting need not be given if the time and place are fixed at the meeting adjourned and if the period of adjournment does not exceed 10 days in any single adjournment. Notice shall be given to any Director absent at any adjourned meeting of the new date, time and place of the meeting.

5.5 Quorum and Voting

A majority of the Board of Directors shall be necessary to constitute a quorum for the transaction of business and, except as otherwise set forth herein, the act of a majority of the Directors present at any meeting where there is a quorum shall be the act of the Board of Directors.

5.6 Compensation

Directors shall receive no compensation for their services as Directors. Directors may, under certain unusual circumstances as may be approved by the Board of Directors, be paid a sum to defray reasonable and actual expenses of attendance at meetings.

5.7 Written Consent

Notwithstanding anything contained herein to the contrary, any action required or permitted to be taken at a meeting of the Board of Directors may be taken without a meeting if all members of the Board of Directors consent thereto in writing and the written consents are filed with the minutes of the proceedings of the Board of Directors.

ARTICLE 6 – OFFICERS

6.1 Election and Tenure

The officers of the FOSA Chapter shall be elected by the Board of Directors at the annual meeting of Directors, except that the initial Board of Directors (see Section 5.1(a)(2)) shall select officers at its

first meeting. Officer shall serve at the pleasure of the Board of Directors, subject to the rights, if any, of any officer under contracts of employment. The Board of Directors shall have a Chair, Finance Chair, and such other officers as the Board of Directors determines is necessary. Such officers shall have such authority and perform such duties as from time to time may be prescribed by the Board of Directors. Officers shall hold their offices for one (1) year or until their successors are chosen. In the event of death, resignation, removal, or disqualification of any officer of the Board of Directors, the Board of Directors shall fill the vacancy pursuant to the provisions of this Section 6.1.

6.2.1 Chair

The Chair shall set the agenda and preside at all meetings of the Board of Directors. The Chair shall be a member ex-officio of all standing and special committees. The Chair shall conduct and oversee day-to-day activities of the FOSA Chapter consistent with the directives of the Board of Directors and shall regularly and to the maximum extent practical inform the President of the FBA of the activities of the FOSA Chapter.

6.2.2 Finance Chair

The Finance Chair of the Board of Directors shall work with the Chair and the President of the FBA to oversee the financial activities of the FOSA Chapter.

6.3 Counter-Signature

All documents that purport to bind the FOSA Chapter must be signed by the President of the FBA.

ARTICLE 7 – COMMITTEES

7.1 Committees

The Board of Directors, by resolution adopted by a majority vote of all Directors, may appoint one (1) or more advisory committees, each of which shall include one (1) or more Members who are Directors of the FOSA Chapter.

7.2 Quorum and Voting

A majority of the members of each of these Committees shall be necessary to constitute a quorum for the transaction of business. A majority vote of the members in good standing present in person shall be sufficient to pass a resolution of the Committee.

ARTICLE 8 – INDEMNIFICATION

8.1 Unless otherwise prohibited by law, the Board of Directors by resolution approved by the Chair (or designee) and President of the FBA, shall indemnify any current or former director, officer, or employee of the FOSA Chapter against any and all expenses (including, but not limited to, counsel fees, costs and disbursements, judgments, fines, penalties and amounts paid as a settlement) and liabilities incurred or

imposed in connection with any claim, action, suit or proceeding (whether actual or threatened, civil, criminal, administrative or investigative, including appeals) to which he or she may be or is made a party by reason of being or having been such director, officer, or employee; provided that there shall be no indemnification in relation to matters as to which he or she is adjudged to be guilty of a criminal offense or liable to the FOSA Chapter for damages arising out of his or her own negligence or misconduct in the performance of a duty. The FOSA Chapter may advance expenses to or, at its expense, undertake the defense of, any director, officer, or employee of the FOSA Chapter; provided further that such director, officer, or employee shall undertake to repay or reimburse such expense if it ultimately should be determined that he or she is not entitled to indemnification. The foregoing indemnification provisions shall apply to claims, actions, suits or proceedings made or commenced after the adoption of this Charter/Bylaws, whether arising from acts or omissions occurring before or after adoption hereof.

- 8.2 To the fullest extent permitted by law and except as otherwise determined by Chair (or designee) and President of the FBA in a specific instance, expenses incurred by a person seeking indemnity hereunder shall be advanced by the FOSA Chapter before final disposition of the proceeding, on receipt by the FOSA Chapter of an undertaking by or on behalf of that person that the monies advanced will be repaid unless it is ultimately determined that the person is entitled to be indemnified by the FOSA Chapter for those expenses.
- 8.3 The FOSA Chapter, upon approval by the Chair (or designee) and President of the FBA, shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the FOSA Chapter, against any liability asserted against or incurred by such person in such capacity, or arising out of such person's status as such, whether or not the FOSA Chapter would have the power to indemnify him or her against such liability under the provisions of this Article 11.

ARTICLE 9 – AMENDMENT

9.1 Subject to approval by the Chair (or designee) and President of the FBA, this Charter/Bylaws and any amendments or alterations thereof may be altered, amended, or repealed by the Members at any annual, general, or special meeting of the FOSA Chapter by a majority vote of the Authorized Voters present to vote, provided notice of such proposed alteration, amendment, or repeal shall have been mailed to each Member in accordance with the notice provisions of Section 4.3.

ARTICLE 10 – LAWS

Notwithstanding anything contained herein to the contrary, this Charter/Bylaws shall apply to Members of the FOSA Chapter and be interpreted in a manner consistent with all laws of the United States and the District of Columbia.

CERTIFICATION

The undersigned, being the Chair of the FOSA Chapter	r, hereby certifies that the foregoing is a true, accurate and
complete copy of the Charter/Bylaws of the FOSA (Chapter, adopted by its Members as of the day of
, 2017.	
	, Chair