



National Spectrum Consortium

Articles of Collaboration

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National Spectrum Consortium Articles of Collaboration

PURPOSE

These Articles of Collaboration (“Articles”) are entered into, as of November 7, 2014, to establish the National Spectrum Consortium.

WHEREAS, the National Spectrum Consortium Members recognize that Government and industry share a common challenge of satisfying vastly increasing demand for the use of electromagnetic spectrum(s);

WHEREAS, the National Spectrum Consortium Members acknowledge that multiple, disconnected efforts currently are addressing this fundamental issue that hampers U.S. innovation and economic growth and hinders U.S. military operations both domestically and overseas;

WHEREAS, the National Spectrum Consortium desires to enter into a ther Transactions Agreement (“OTA”) with the U.S. Government (“Government”) to develop and mature technologies and support policy development to enable advanced approaches to electromagnetic spectrum use;

WHEREAS, the National Spectrum Consortium Members concurrently wish to sustain and expand their collective technical superiority by collaborating to provide quick and efficient delivery of critical spectrum technologies to enhance electromagnetic spectrum awareness, sharing, and use through a partnership with the Government and National Spectrum Consortium Members;

WHEREAS, the National Spectrum Consortium Members wish to provide a unified and compelling message regarding the strategic importance of spectrum technologies in current and future systems;

WHEREAS, the National Spectrum Consortium Members wish to define programs and obtain program funding that is focused on the development, demonstration and transition of key technologies that will result in current spectrum system improvements or the fielding of new systems; These technologies include but are not limited to: Electromagnetic spectrum sharing, use, and awareness, Massive Multiple Input, Multiple Output, 3D Beam-Forming, Waveform diversity, Multi-Function Radio Frequency, Cognitive Spectrum Sharing, Machine Learning, Cognitive Sensing, “Smart” Technologies, Virtual Reality, Augmented Reality, Mixed Reality, Digital Twin, Narrow Band Internet of Things, Massive Internet of Things, Critical Internet of Things, Device-to-Device Communications, Vehicular Ad-Hoc Networks, Vehicular Ad-Hoc Network Cloud, Autonomous Navigation, Wireless Software Defined Network, Network Function Virtualization, Heterogeneous Networks, Network Ultra-Densification, Next Generation Radio Access Networks, 5G, Cyber-Physical Systems;

WHEREAS, the OTA provides, among other things, for the grant of certain rights and obligations arising out of the research programs and projects conducted by the Government and the National Spectrum Consortium Members pursuant to these Articles;

WHEREAS, the National Spectrum Consortium Members are entering into these Articles in order to provide for (i) a consortium to conduct research, development, and demonstration of prototype projects and programs, (ii) their respective rights and obligations as a Member of the consortium, and (iii) administrative matters pertaining to the conduct of activities as Members of this consortium;

WHEREAS, each National Spectrum Consortium Member reserves their right to review and accept any government agency or department agreement specific terms prior to any active participation in any National Spectrum Consortium project described herein;

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants and promises contained in these Articles, the National Spectrum Consortium Members agree as follows:

DEFINITIONS

HEREINAFTER the following definitions apply:

Affiliate means, with respect to a specified Member that is a signatory to these Articles, any corporation, company, partnership, joint venture and/or firm which now or hereafter controls, is controlled by or is

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under common control of such specified Member. For purposes of this definition, "control" shall mean (i) in the case of corporate entities, direct or indirect ownership of at least 50% of the stock or shares entitled to vote for the election of directors; and (ii) in the case of non-corporate entities, direct or indirect ownership of at least 50% of the equity interest with the power to direct the management and policies of such non-corporate entities.

National Spectrum Consortium means the National Spectrum Consortium, which is made up of consortium Members from industry, academia, non-profit organizations, and not-for-profit organizations pursuant to these Articles.

Spectrum Technology Base Agreement means the agreement between the National Spectrum Consortium Management Firm and the National Spectrum Consortium Member organization or a team of National Spectrum Consortium Member entities, under the terms of an agreement between the firm and the Government, which serves as the baseline agreement for all future Spectrum Technology Project Agreements. The Technology Base Agreement, among other things, flows down applicable terms and conditions from the OTA between the Government and the National Spectrum Consortium.

Spectrum Technology Project Agreements refer to agreements issued by the Consortium Management Firm, under the terms of a Spectrum Technology Base Agreement, for a specific spectrum technology project.

National Spectrum Consortium Member organization(s) means large and small businesses in accordance with the Small Business Administration business size standards (see Article 1, Annual Dues), for profit and not-for-profit entities, and academic research institutions that are or become Members in accordance with the National Spectrum Consortium Membership Agreement.

Charter Consortium Member(s) means those Consortium Members as set forth in Exhibit A that comprised the Steering Committee of the National Spectrum Consortium, which developed these Articles.

Consortium Management Firm refers to the agency acting solely on behalf of the National Spectrum Consortium (not as an agent of any individual Member) to negotiate, execute and administer the National Spectrum Consortium's efforts under an Other Transaction Agreement, herein referred to as "OTA," for this program as defined in the specific Management Services Agreement entered into between the National Spectrum Consortium and the Consortium Management Firm. The National Spectrum Consortium intends to enter into a Management Services Agreement with Advanced Technology International (ATI) to perform this role (i.e., to be the Consortium Management Firm).

Non-traditional Government Contractor an entity that is not currently performing and has not performed, for at least one-year prior to the date of application, any contract or subcontract for the Department of Defense that is subject to full coverage under the cost accounting standards prescribed pursuant to section 1502 of title 41 and the regulations implementing such section. A Non-traditional Government Contractor determination can be made at the prime level, for team members, for subcontractors, and for lower tier vendors. This determination also can be made for "intra-company" business units provided the business unit makes a significant contribution to the prototype initiative (i.e., is a key participant). Examples of what might be considered a significant contribution include supplying new key technology or products, accomplishing a significant amount of the effort, or in some other way causing a material reduction in the cost or schedule or increase in the performance. The National Spectrum Consortium Executive Committee, as defined below, will follow the specific guidance from the Government concerning the use of Non-traditional Government Contractors. Non-traditional Government Contractors will be required to provide a DUNS number.

Other Transactions Agreement means the OTA which is entered into by the Government and the National Spectrum Consortium.

Member, or Members means respectively an individual National Spectrum Consortium Member organization or the National Spectrum Consortium Member organizations collectively that are signatories to the National Spectrum Consortium Membership Agreement and must have a Department of Defense Joint Program Certification in accordance with DD Form 2345.

Person means an individual.

ARTICLE 1: OBJECTIVES

As of the Effective Date (as defined in Article 3) of these Articles, the Members hereby agree to create the National Spectrum Consortium. The National Spectrum Consortium is the result of an invitation by the Government to form a consortium comprised of traditional and non-traditional government contractors, small and large businesses, for-profit and not-for-profit entities, academic organizations, and their affiliated organizations to enter into the OTA to develop and mature technologies and support policy development to enable advanced approaches to electromagnetic spectrum use (including prototype projects). The OTA is entered into under the authority of the Department of Defense under 10 U.S.C. § 2371, Section 845 of the 1994 National Defense Authorization Act, P.L. 103-160, as amended by Section 241 of the FY 1999 Strom Thurmond National Defense Authorization Act, P.L. 105-261 and Section 822 of the FY 2002 National Defense Authorization Act, P.L. 107-107.

The National Spectrum Consortium shall operate with the following principal goals: (i) maturing technologies that assist in improved electromagnetic spectrum awareness, sharing, and use; (ii) experimentation to better inform the optimal allocation of those technologies for both public and private objectives; (iii) demonstration of new technologies to increase trust among spectrum stakeholders; and (iv) policy development to ensure technologies do not outpace the appropriate guidance for their best use. Through the National Spectrum Consortium established by these Articles, Members may propose and perform research, development and engineering activities, in cooperation with the Government, to address the Government's long range science and technology objectives.

The following are the specific objectives of the collaborative effort between the Members and the Government:

- Establish sound technical and programmatic performance goals based on the needs of the user;
- Provide a unified voice for effectively articulating the strategically important role electromagnetic spectrum technologies play in government and industry systems;
- Collaboratively and collectively provide the Government with input and advice on non-proprietary, non-confidential technical concepts and issues;
- Create programs and secure funding focused on developing key technologies and spectrum systems improvements;
- Effectively develop critical technologies that can be rapidly and affordably transitioned to Government and industry end users;
- Enter into an the OTA with the Government to provide the Government assistance and expertise in developing and executing nationally-focused spectrum endeavors by performing certain research and development (including prototype projects) in the various technology areas affecting electromagnetic spectrum awareness, sharing and use, to be conducted in collaboration with the Government and the Members. The Members hereby establish collaborative research efforts of limited duration to gain further knowledge and understanding of spectrum-related technologies required as more particularly described or identified in the OTA with the Government for the purposes as set forth therein.
- Collaborate with other Government agencies or industry in order to fund the activities undertaken by the National Spectrum Consortium initially based on Federal e.g., DoD and other, funding as well as the resources and expertise of private sector participants. Given the broad range of interests in improving spectrum exploitation, funding needs may exceed the resources immediately available from the participants. Because promising new research opportunities may become evident during the course of the Consortium's activities, the Consortium commits itself to exploring and potentially employing a variety of additional sources of outside investment to accelerate and expand its operations. These activities include, but are not limited to, exploration of proposed financing models and working together to customize various models in support of the National Spectrum Consortium.

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By execution of the National Spectrum Consortium Membership Agreement, each Member authorizes the Consortium Management Firm to enter into transactions on behalf of the National Spectrum Consortium with the Consortium Members that shall hereinafter be referred to in each case as a “Spectrum Technology Base Agreement.”

Membership

As of the Effective Date of these Articles, the Members are those Charter Members listed at Exhibit A. The Consortium Management Firm will maintain a current membership list and will make it available on a National Spectrum Consortium website as additional members join the consortium. The intent of the Members is that the National Spectrum Consortium will be open to and include Members from industry, academic research institutions, and non-profit and not-for-profit organizations. The Members adopt a non-exclusive, open membership policy. The Members will include additional Members in accordance with the provisions contained in the National Spectrum Consortium Membership Agreement and in the OTA. The National Spectrum Consortium, through its Executive Director, will notify the Government of the addition or deletion of Members. Any Member, regardless of when they join the National Spectrum Consortium, shall enjoy the same rights and incur the same obligations as any other Member hereunder.

Annual Dues. Membership in the National Spectrum Consortium will become effective upon submission of the membership application and payment of the initial dues assessment. National Spectrum Consortium Members will pay annual dues in the amounts as follows: \$500 for all organizations (dues changed effective 10/1/19 per resolution 008). National Spectrum Consortium Members will pay annual dues every October 1st. New Members will pay pro-rated dues payable upon initial acceptance of membership and then \$500 per year every October 1st thereafter. The pro-rated dues structure, based upon the date of initial application acceptance, is as follows:

All organizations:

- a) October through December - \$500
- b) January through March - \$375
- c) April through June - \$250
- d) July through September - \$125

SBA size standards will be used to determine business size. Small business size standards define the largest that a business concern, including all of its affiliates, may be and yet qualify as a small business concern for SBA and most other federal programs, The SBA has established two widely used size standards – 500 employees for most manufacturing industries and \$7.5 million in average annual receipts for many nonmanufacturing industries.

Project Award Assessment. In addition to any initial and annual dues that all Members of the National Spectrum Consortium are required to pay, all recipients of Spectrum Technology Project Agreement funding shall pay an assessment on all Government funds awarded under such Spectrum Technology Project Agreement to the National Spectrum Consortium via the designated Consortium Management Firm. These funds are collected to supplement the revenue generated from initial pro- rated and annual Member dues to provide sufficient resources for conducting the required business affairs of the National Spectrum Consortium. The “per project award” assessment percentage will be established annually by the Executive Committee based on changes in membership numbers, the volume of Government funds that flow through the OTA between the National Spectrum Consortium and the Government, and/or the needs of the National Spectrum Consortium.

Outstanding Financial Obligations of a Member. In the event of the withdrawal of a Member pursuant to this Article, such Member's financial obligations to the consortium shall remain in full force and effect until all outstanding obligations to the consortium are satisfied according to these Articles.

ARTICLE 2: CONSORTIUM MANAGEMENT

Executive Committee

The affairs of the National Spectrum Consortium shall be governed by an Executive Committee of eleven (11) elected representatives from Member organizations, each to serve for a term of three (3) years. The Executive Committee shall be composed of four (4) Members from small businesses (as defined by SBA), three (3) Members from large businesses, two (2) Members from academia, one (1) Member from a non-profit or not-for-profit organization, and one (1) at large Member. The Executive Committee Officers shall include a Chairperson, a Vice-Chairperson, and a Treasurer, to be elected by the Executive Committee. The Executive Committee will assume responsibility for implementing firewalls or such other measures to protect competitively sensitive information of the Members and to avoid and mitigate potential organizational conflicts of interest. The oversight of such duties may be transferred to the Consortium Management Firm. Any person serving on the Executive Committee may be relieved of his/her position at any time for cause by a super-majority that shall consist of three-quarters (3/4) vote of the National Spectrum Consortium Executive Committee Members who are eligible to vote.

Chairperson

The Chairperson shall preside over all meetings of the Executive Committee, performing all duties customary to that office and supervising and controlling all of the affairs of the Executive Committee in accordance with policies and directives approved by the Executive Committee. The Chairperson shall be authorized to sign the OTA and subsequent modifications to the OTA, on behalf of the National Spectrum Consortium. The Chairperson shall not serve successive terms. The Chairperson of the Executive Committee shall sign the management services agreement with the selected Consortium Management Firm as authorized by the Executive Committee.

Vice-Chairperson

The Vice-Chairperson shall act under the direction of the Chairperson and in the absence or disability of the Chairperson shall perform the duties and exercise the powers of the Chairperson. The Vice-Chairperson shall perform such other duties and have such other authority as the Executive Committee may from time-to-time prescribe by standing or special resolution, or as the Chairperson may from time-to-time provide, subject to the authority and the supervision of the Executive Committee. The Vice-Chairperson is authorized to sign the OTA and subsequent modifications to the OTA, on behalf of the National Spectrum Consortium, in the absence of the Chairperson.

The Vice Chairperson shall also be responsible for the communication of National Spectrum Consortium matters. As such, the Vice chairperson is responsible for the development of an annual communications plan, reviewing and approving all press releases and advertising, and all actions regarding public relations (e.g., trade shows, certain trade association interfaces, etc.).

Treasurer

The Treasurer shall act under the direction of the Chairperson as the financial representative responsible for making financial decisions and reviewing and approving all vouchers presented by the Consortium Management Firm for payment. The Treasurer shall approve disbursement of National Spectrum Consortium funds by the Consortium Management Firm, and shall render to the Chairperson and the Executive Committee, at its regular meetings, or when the Executive Committee so requires, an account of the Consortium Management Firm's transactions and of the financial condition of the National Spectrum Consortium.

Ex-Officio Members

The Government may elect to send representatives to participate in Executive Committee meetings as non-voting Members.

Subcommittees

The Executive Committee shall have the authority to form subcommittees comprised of representatives from Member organizations to advise the National Spectrum Consortium and if applicable the Government on topics of special interest to the Members, including intellectual property, resolutions of organizational conflicts of interest and procurement integrity.

Consortium Management Firm

The Members agree to use Advanced Technology International (ATI) as the Consortium Management Firm to administer the affairs of the National Spectrum Consortium under the direction of the Executive Committee. The Consortium Management Firm is prohibited from participating in technical project work of the National Spectrum Consortium. The Chairperson of the Executive Committee is authorized to communicate with the Consortium Management Firm on behalf of the Executive Committee.

The Consortium Management Firm shall manage and coordinate the affairs of the National Spectrum Consortium. The Consortium Management Firm shall:

- Act as the administrative point of contact for the National Spectrum Consortium under these Articles and any amendments hereto;
- Represent the Executive Committee in negotiating with the Government on issues involving the OTA;
- Provide “single point contracting” functions as needed to execute the OTA statement of work;
- Guard against the disclosure of competitively sensitive information and, together with the Executive Committee, institute policies and procedures to prevent potential violations of antitrust law;
- Together with the Executive Committee, take appropriate steps to avoid organizational conflicts of interest among the Members and to mitigate such conflicts if they cannot be avoided;
- Be responsible for obtaining signatures of the Members on any amendments to these Articles;
- Request nominations, prepare a slate of candidates for any open committee positions, provide notice of committee membership and membership changes to the Members and the Government, provide notice of the Executive Committee meetings and a request for agenda items to the Members, and provide notice of Member additions and deletions to the Government; and
- Invoice, collect, and track membership dues/ projects assessments from Member Companies. Provide quarterly financial reports to the Consortium Executive Committee.

Executive Director

The Consortium Management Firm will provide an Executive Director as the single point of contact to the Members, the Government or their respective designees. The Executive Committee will approve the person assigned. The Executive Director shall serve on the National Spectrum Consortium Executive Committee as a non-voting Member.

Chief Strategy Officer

The Consortium Management Firm will provide a Chief Strategy Officer who will advise the Executive Committee on creating, communicating, executing, and sustaining strategic initiatives. The Executive Committee will approve the person assigned. The Chief Strategy Officer shall serve on the National Spectrum Consortium Executive Committee as a non-voting Member.

ARTICLE 3: EFFECTIVE DATE

These Articles shall first become effective on 7 November 2014, which corresponds to the date that the National Spectrum Consortium Charter Members listed in Exhibit A voted to approve these Articles.

ARTICLE 4: TERM

These Articles shall continue for a period of ten (10) years from the Effective Date of these Articles. These Articles shall continue in full force and effect for the life of the National Spectrum Consortium. Articles which by their express terms or by necessary implication apply for periods of time other than as specified in this Article shall be given effect for such period of time, notwithstanding this Article. If the Executive Committee agrees, the term of these Articles may be extended through an amendment of these Articles.

Renewal

Prior to the expiration date of these Articles, the Members agree to enter into good faith negotiations to establish either an extension to these Articles, a follow-on agreement, or a consortium disestablishment plan.

Survival

Notwithstanding the above provisions, the Member's rights and obligations with respect to Spectrum Technology Project Agreements and/or specific intellectual property agreements by and between the Government and the Member(s) shall survive any expiration or termination of these Articles.

Withdrawal

Termination of Membership. Membership in the National Spectrum Consortium shall automatically terminate under the following conditions:

- By written agreement of the Members,
- After the Government's failure to extend the OTA or issue a new other transactions agreement to the National Spectrum Consortium (and within ninety (90) days after the expiration or termination of the relevant other transactions agreement).

Voluntary Withdrawal. Provided that the Member has satisfied its obligations under the OTA and Base Agreement, the Member may voluntarily withdraw from the National Spectrum Consortium at any time by notice of withdrawal given to the Executive Committee.

Involuntary Withdrawal. If a Member materially breaches any material warranty, term or condition of these Articles (including failure to pay annual dues or project award assessments) and fails to remedy such material breach within ninety (90) days after receipt of notice of such material breach from another Member and/or the Executive Committee, the Executive Committee shall have the right to cause the involuntary withdrawal of such Member, such withdrawal to be effective immediately upon delivery of a notice from the Executive Committee to such Member indicating their election to cause such involuntary withdrawal to occur.

Rights of a Member. After the effective date of withdrawal of a Member, such Member shall cease to have any rights as a Member under these Articles.

Continued Funding and Technology Contribution Commitment. In the event of the voluntary withdrawal of a Member pursuant to this Article such Member's rights and obligations pursuant to any Spectrum Technology Project Agreements, including but not limited to, continued funding and technology contribution commitments shall continue in accordance with the specific terms of the Spectrum Technology Project Agreements.

ARTICLE 5: PROPRIETARY INFORMATION

The Proprietary Information Exchange Agreement is attached at Exhibit B.

ARTICLE 6: AUDIT

The Consortium Management Firm shall be the single point of contact for supporting audits required by the OTA. The terms of the OTA shall be the exclusive criteria for audit access to a Member's business.

ARTICLE 7: DISCLAIMERS / REPRESENTATIONS AND CERTIFICATIONS

Representations and Warranties of All Members. Each Member represents and certifies that:

- It is free to enter into these Articles;
- In so doing, it will not violate any other agreement to which it is a Member; and
- It has taken all action necessary and required to authorize the execution and delivery of these Articles and the performance of its obligations under these Articles.

ARTICLE 8: LIABILITY AND INSURANCE

Liability. To the extent authorized under individual state law for a state owned Member, each Member acknowledges that it shall be responsible for any loss, cost, damage, claim, or other charge that arises out of or is caused by the actions of that Member or its employees or agents to the extent of its negligence. No Member shall be liable for any loss, cost, damage, claim, or other charge that arises out of or is caused by the actions of any other Member or its employees or agents. Joint and several liabilities will not attach to the Members; no Member is responsible for the actions of any other Member, but is only responsible for those tasks accepted by it and to which it agrees in any subsequent funding agreement. The Members agree that in no event will consequential, incidental, special, exemplary or punitive damages be applicable or awarded with respect to any dispute that may arise between or among the Members in connection with these Articles. In performing any obligation created under these Articles, the Members agree that each Member is acting as an independent party and not as an agent of any other Member.

Insurance. Each Member agrees to obtain and maintain appropriate public liability and casualty insurance or adequate levels of self-insurance, to insure against any liability caused by that Member's obligations under these Articles and the National Spectrum Consortium Membership Agreement.

ARTICLE 9: LIMITATION ON DISCLOSURE

Except as expressly provided for in these Articles, no one Member has the obligation to disclose to another Member any market data or plans except as such information is made publicly available. The Members will not exchange competitively sensitive information with one another, including, without limitation, proprietary cost or pricing data. The Members will not exchange competitively sensitive information regarding projected sales or profitability.

ARTICLE 10: INDEPENDENT CONTRACTOR STATUS

The relationship of the Members established by these Articles is that of independent contractors, and nothing contained in these Articles shall be construed to (i) give any of the Members hereto the power to direct or control the day-to-day activities of another Member hereto, (ii) constitute the Members as partners, joint ventures, co-owners or otherwise as participants in a joint or common undertaking, or (iii) allow any of the Members hereto to create, discharge or assume any obligation on behalf of another Member hereto for any purpose whatsoever. Each Member retains the right to engage independent research and activities that may compete with, or be contrary to, the goals of the National Spectrum Consortium.

ARTICLE 11: INTELLECTUAL PROPERTY

Except and to the extent specifically set forth herein, nothing in these Articles shall be construed as conferring by implication, estoppel or otherwise any license or right under any patent, copyright, trade secret, trademark or other proprietary right of any Member.

Regarding Consortium Members entering into individual Member-to-Member agreements, intellectual property shall be treated in accordance with the following principles:

- (a) Intellectual Property developed or otherwise acquired by a Member prior to or outside the scope of an individual Member-to-Member agreement ("Background Intellectual Property"), and any

Intellectual Property Rights therein, shall be owned by the Member that developed or otherwise acquired the Background Intellectual Property and associated rights.

(b) Intellectual Property developed solely by employee(s) of one Member in performance of an individual Member-to-Member agreement (“Foreground Intellectual Property”), and any Intellectual Property Rights therein, shall be solely owned by the Member whose employee(s) developed the Foreground Intellectual Property.

(c) Intellectual Property developed jointly by employees of both Members in performance of an individual Member-to-Member agreement (“Jointly Developed Intellectual Property”), and any Intellectual Property Rights therein, shall be jointly owned by the Members. Each Member shall have an equal undivided one-half interest in Jointly Developed Intellectual Property and any Intellectual Property Rights therein. Each Member agrees to use reasonable efforts to maintain Jointly Developed Intellectual Property as confidential and proprietary in the same manner it treats its own Intellectual Property of a similar character. Each Member shall be free to make, use, sell and import/export products or processes incorporating Jointly Developed Intellectual Property without the consent of, or accounting to, the other Member, unless such Jointly Developed Intellectual Property incorporates the other Member’s Background Intellectual Property or Foreground Intellectual Property or use thereof would constitute an infringement of the other Member’s solely-owned Intellectual Property Rights.

(d) The Consortium itself will not receive any rights to any Member’s intellectual property.

Regarding agreements between the National Spectrum Consortium and/or individual Members, and the Government, rights to intellectual property will be treated in accordance with the terms of any applicable other transaction agreement and any follow-on production contracts resulting from such other transaction agreement.

ARTICLE 12: FILING WITH U.S. ATTORNEY GENERAL AND FEDERAL TRADE COMMISSION

Except for the disclosure of basic information regarding the National Spectrum Consortium (i.e., membership, purpose and a general description of the technical work), formal written approval by the National Spectrum Consortium Executive Committee is required for any specific publicity or advertising relative to these Articles. However, the Members agree that notification of the establishment of the National Spectrum Consortium (and subsequent addition or deletion of Members) shall be filed with the U.S. Attorney General and the Federal Trade Commission by the Consortium Management Firm on behalf of the Members in accordance with the provision of the National Cooperative Research Act of 1984 within 90 days of execution of these Articles, with a copy provided to all Members. The costs of this filing shall be borne by the National Spectrum Consortium.

ARTICLE 13: NOTICES

Any notice or other communication required or permitted under these Articles shall be in writing and (i) personally delivered, (ii) mailed, postage prepaid, first class, certified mail, return receipt requested, (iii) sent, shipping prepaid, return receipt requested by national overnight courier service, or (iv) sent by electronic mail to the appropriate Member or Members at the addresses as set forth in Exhibit A or at such other addresses as may be given from time to time in accordance with the terms of this provision.

Any notice or other communication given by personal delivery shall be deemed given on the date personally delivered; any notice or other communication given by mail shall be deemed given four (4) days after the date deposited in the United States mail; and any notice or other communication given by national overnight courier service shall be deemed given on the next business day after being sent.

ARTICLE 14: DISPUTES

The Members recognize that disputes pertaining to certain matters may from time to time arise during the term of these Articles, which relate to a Member's rights and/or obligations hereunder or thereunder. It is the objective of the Members to establish procedures to facilitate the resolution of disputes arising under these Articles in an expedient manner by mutual cooperation and without resort to litigation. To accomplish this objective, the Members agree to follow the procedures set forth in this Article if and when a dispute arises under these Articles. However, if an organization can provide evidence that it is prohibited from entering into binding arbitration, the dispute resolution procedures will be negotiated on a case by case basis.

Dispute Resolution Representatives

In the event of disputes between the Members, including disputes among the Members' representatives to the Executive Committee which such representatives are unable to resolve, a Member seeking to resolve such dispute will, by written notice to the other, have such dispute referred to their respective executive officers designated below or their successors, for attempted resolution by good faith negotiations within fourteen (14) days after such notice is received. Said designated officers are as follows:

- For the Member: Designated Senior Executive
- For the National Spectrum Consortium: Consortium Management Firm

In the event the designated officers are not able to resolve such dispute, either Member may at any time after the fourteen (14) day period invoke the provisions of the Alternate Dispute Resolution provision below.

Alternative Dispute Resolution

Following settlement efforts pursuant to the procedures in this Article, any dispute, controversy or claims arising out of or relating to the validity, construction, enforceability or performance of these Articles, including disputes relating to alleged breach or to termination of these Articles, shall be settled by binding Alternative Dispute Resolution ("ADR") in the manner described below:

- ADR Request: If a Member intends to begin an ADR to resolve a dispute, such Member shall provide written notice (the "ADR Request") to the other Member informing such other Member of such intention and the issues to be resolved.
- Additional Issues: Within ten (10) business days after the receipt of the ADR Request, the other Member may, by written notice to the Member initiating ADR, add additional issues to be resolved.
- No ADR of Intellectual Property or Patent Issues: Disputes regarding the ownership of, and/or rights to Intellectual Property, including the scope, validity and enforceability of patents, shall not be subject to the ADR provision in this Article but rather submitted to a court of competent jurisdiction.

Arbitration Procedure

Any dispute or claim arising out of, or in connection with these Articles shall be finally settled by binding arbitration in accordance with the then current rules and procedures of the American Arbitration Association. The arbitration shall be conducted by three (3) arbitrators having experience with the issue under consideration, one (1) each to be appointed by the Members in dispute and a third being nominated by the two (2) arbitrators so selected or, if they cannot agree on a third arbitrator, by the President of the American Arbitration Association. Such arbitration will take place at a location agreeable to the Members who are parties to the dispute. If no agreement as to venue is reached within fifteen (15) business days of written notice that a Member seeks arbitration of a dispute, a majority of the Executive Committee shall choose the place of arbitration. The arbitrators shall apply the law of the state in which the dispute arose to the merits of any dispute or claim, without reference to rules of conflicts of laws. Judgment on any award rendered by the arbitrators may be entered in any court having jurisdiction thereof. The Members agree that, any provision of applicable law notwithstanding, they will not request, and the arbitrators shall have no authority to award punitive or exemplary damages against any Member. Nothing in this Article shall limit a Member's right to seek injunctive relief with respect to a breach or threatened breach of these Articles.

ARTICLE 15: ASSIGNMENT

Neither these Articles nor any rights hereunder, in whole or in part, shall be assignable or otherwise transferable without the prior written consent of the National Spectrum Consortium Executive Committee; which consent shall not be unreasonably withheld. A Member may assign its rights and delegate its obligations (i) to any affiliate of such Member (although, in the event of any such assignment and delegation, the assigning Member shall remain primarily liable for its obligations hereunder) and (ii) to a purchaser of all or substantially all of the business of such Member to which these Articles relates by merger, sale of assets or otherwise. If the Member, after the assignment or purchase cannot meet the requirements for Consortium membership as called out in these Articles and the National Spectrum Consortium Membership Agreement, the Member will be considered to have voluntarily withdrawn from the National Spectrum Consortium in accordance with Article 4 herein.

ARTICLE 16: GOVERNING LAW

This Agreement shall be interpreted by application of New York law without regard to its conflicts of law provisions. Where Member is a non- New York state governmental entity, this Section will be deemed to be deleted and replaced with the following, "Nothing in this Agreement is intended to cause Member to waive the legal immunities and defenses provided under its State enabling laws."

ARTICLE 17: ENTIRE AGREEMENT

These Articles, including all Exhibits referred to herein, constitute the entire agreement of the Members and supersede all prior and contemporaneous agreements, understandings, negotiations and discussions among the Members, whether oral or written, with respect to the subject matter hereof.

ARTICLE 18: INVALIDITY OF PROVISIONS

If any provision of these Articles is deemed to be invalid, illegal or unenforceable by any court of competent jurisdiction, such provision will be deemed amended to conform to applicable laws of such jurisdiction so as to be valid and enforceable or, if it cannot be so amended without materially altering the intention of the Members, it will be stricken and the remainder of these Articles will remain in full force and effect.

ARTICLE 19: GENERAL PROVISIONS

Order of Precedence. Should there be any conflict between the terms and conditions of these Articles and the OTA, the OTA shall take precedence.

Amendments. No amendment or modification of these Articles shall be valid unless agreed to in writing by two-thirds (super-majority) of the National Spectrum Consortium Executive Committee membership. The Executive Committee may, at its discretion, refer certain proposed amendments to the full National Spectrum Consortium membership for validation by a majority vote of the membership. All proposed amendments to these Articles shall be distributed to the Executive Committee Members at least thirty (30) days prior to the proposed effective date.

Waiver. No waiver of any rights shall be effective unless agreed to in writing by the Member to be charged. Waiver by any Member of any breach or failure to comply with any provision of these Articles by another Member shall not be construed as, or constitute, a continuing waiver of such provision or a waiver of any other breach of or failure to comply with any other provision of these Articles.

Section Headings. The headings of the several sections of these Articles are intended for convenience of reference only and are not intended to be a part of, or to affect the meaning or interpretation of these Articles.

Obligations of the Members. The Members agree to work together to accomplish the objectives of the National Spectrum Consortium by carrying out their responsibilities as set forth in any Spectrum Consortium Project Agreement issued through the National Spectrum Consortium.

Compliance with Antitrust Laws. The Members shall comply with all applicable U.S. antitrust laws.

Compliance with U. S. Export Laws. The Members shall comply with all applicable export control laws and regulations of the United States, including the Arms Export Control Act (“AECA”), the International Traffic in Arms Regulations (“ITAR”), the Export Administration Regulations (“EAR”), and other U.S. government directives related to export control. No Member shall export or re-export any information, data, technical know-how, products, goods or related services (“Controlled Items”) under these Articles in violation of the AECA, ITAR or EAR. No Member shall disseminate any Controlled Item to a foreign person (as defined in the ITAR), or to persons and affiliated entities of foreign governments, foreign government agencies or foreign organizations, under these Articles in violation of the AECA, ITAR or EAR. No Member shall disseminate any Controlled Item to any person or affiliated entity of a person or entity named on the U.S. Department of Treasury Denied Parties List, the U. S. Department of Commerce Unverified List or U. S. Department of Commerce Entity List or any other U.S. government list of persons or entities under these Articles to which dissemination of Controlled Items shall not be made.

Use of Names. Neither any Member nor the National Spectrum Consortium (including its affiliated entities) shall use the name, trademarks, other marks or logos of any other Member in any way, including but not limited to advertising, promotional, or sales literature, without prior written consent, in each and every instance.

IN WITNESS WHEREOF, the Members have caused these Articles to be executed by the duly authorized representatives on the respective dates entered below.

COMPANY NAME

By: _____

Title: _____

Date: _____

Exhibit A: Charter Membership Listing

Georgia Tech Applied Research Corporation

Northrop Grumman Corporation

Shared Spectrum Company

The Disney / ABC TV Group

The University of Mississippi

Vanu, Inc.

EXHIBIT B: PROPRIETARY INFORMATION EXCHANGE AGREEMENT

1. During the term of the Articles, the Members of the National Spectrum Consortium agree that they may exchange confidential or proprietary information (“Confidential Information”) with Members having a need to know, for the purpose of furthering the goals of the National Spectrum Consortium as defined in the Articles. Confidential Information is defined as all confidential and proprietary information disclosed by a Member to another Member or other Members including, without limitation, information regarding existing and future technical, business and marketing plans and product strategies; cost and pricing information; employees’ names, titles, job descriptions and salaries; business practices, policies, methodologies and procedures; proprietary data, data models, product designs, capabilities, specifications, program code, and software systems and processes; samples and devices; demonstrations; and/or other proprietary and/or competition sensitive information. Confidential Information also shall include the identity of and the confidential and/or proprietary information of a Member’s subsidiaries, affiliated companies, business partners, customers, potential customers and suppliers. The initial effective date of this Proprietary Information Exchange Agreement (“Agreement”) shall be the effective date of the Articles. Thereafter, this Agreement shall be effective for any new Members to the Articles on the date such new Member signs the National Spectrum Consortium Membership Agreement.

2. Notwithstanding that the term of this Agreement will have expired for a period of ten (10) years from receipt, each Member agrees to keep in confidence and prevent the use (except for the purposes of this Agreement) or the disclosure to any person or persons outside the receiving Member’s organization, and limit the disclosure inside its organization to employees having a need-to-know, of all Confidential Information received under this Agreement (provided such Confidential Information is marked with a confidential or proprietary legend by the disclosing Member). The Members shall take every reasonable effort to keep properly marked “Confidential Information” confidential. In order to be protected hereunder, data which is (i) in written form shall be clearly labeled as confidential or proprietary and receiving Members shall have no obligation regarding information which is not so labeled, and (ii) first disclosed orally or by demonstration must be identified as proprietary or confidential at the time of disclosure, and shall be reduced to writing or other tangible form, and marked as “Confidential Information,” within thirty (30) days after such disclosure or demonstration. All protection and restrictions as to use and disclosure shall apply during such thirty (30) day period. Any markings, stamps or legends identifying proprietary or confidential information hereunder shall not impose any obligations on another Member inconsistent with this Agreement.

Notwithstanding the foregoing, each receiving Member understands that the disclosing Member and its affiliates are actively engaged in activities, investment, technology exploitation and research and development efforts (collectively, the “Business Activities”), and that Confidential Information disclosed to the receiving Members may include, without limitation, descriptions of ideas, works in progress and projects in development that may be similar to or coincident with such Business Activities. Each Member further acknowledges that such Business Activities may have originated with the disclosing Member’s employees (or those of its affiliates) or others and may duplicate, parallel or resemble portions of the Confidential Information. The Members agree that this Agreement shall in no way limit, restrict or preclude any Member from pursuing any of its present or future Business Activities or interests, either alone or in conjunction with others, or from entering into any agreement or transaction of any kind with any other person, regardless of whether the subject matter of any such agreement or transaction involves elements similar to or coincident with Confidential Information exchanged hereunder or is in any other way similar to or coincident with any transaction considered or evaluated by the Members.

3. The above restrictions on use and disclosure of properly marked Confidential Information shall not apply to such data if the same:

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- a. is in the public domain or in the possession of the receiving Member without restriction at the time of receipt under this Agreement;
- b. Is used or disclosed with prior written approval of the disclosing Member;
- c. Is used or disclosed after ten (10) years from the date of first receipt under this Agreement;
- d. Is developed independently by the receiving Member;
- e. Has been rightfully received by the receiving Member from a third party without breach of this Agreement or other wrongful act of the receiving Member;
- f. Is made available by the disclosing Member to a third party, except to the US Government, on an unrestricted, non-confidential basis; and
- g. Was known and can be shown by clear and convincing evidence to have been known by the receiving Member at the time of its disclosure by the disclosing Member.

In addition, each Member understands and agrees that all information, ideas, suggestions and concepts of a general nature or commonly known in the industry related to the exploitation of information and entertainment through electronic multimedia and interactive products and services that may be offered in meetings, consultations or documents exchanged between the Members shall not be deemed included in the Confidential Information of any Member, and no Member shall be under any obligation to any other Member with respect to its own use thereof.

In the event a receiving Member is required to disclose a disclosing Member's properly marked Confidential Information pursuant to a final binding order of a governmental agency or court of competent jurisdiction, the receiving Member shall give the disclosing Member reasonable notice of the pendency of such an order. Additionally, in the event that one Member is requested or required to disclose any of the Confidential Information in an investigatory, legal, regulatory or administrative proceeding, such Member will provide the other Members with prompt notice thereof so that such other Members may seek a protective order or other appropriate remedy. However, if no such order or remedy is obtained, such Member may, without liability hereunder, disclose in such proceeding that portion of the Confidential Information that its legal counsel has advised it is legally required to be disclosed.