

Consortium Agreement

Section 1 Purpose

The Ohio Consortium for Advanced Communications Technology (hereinafter OCACT) intends to use the Advanced Communication Technology Satellite (ACTS) as the foundation of a consortium created for education and research based activities related to Ka-band satellite communications systems and operations. Further, it is hoped that the consortium will enable economic invigoration in Ohio and the Nation by providing advanced technology and facilities to build the communication infrastructure needed for the future, and aid small businesses developing new Ka-band equipment and services.

The ACTS is an asset owned by the National Aeronautics and Space Agency (herein NASA). The Glenn Research Center, in Cleveland Ohio (hereinafter GRC), is the NASA field center responsible for the ACTS. GRC has entered into an agreement with the Ohio Board of Regents (herein OBR) in Columbus, Ohio and with the Ohio University (hereinafter O.U.) to give access to and use of the ACTS system in consideration of the Consortium reimbursing GRC for the costs of operations, and providing services to the Consortium.

Section 2 Agreements and Understandings Reached to Date

Agreements

A NASA Space Act Agreement between the GRC and the OBR and OU.

Understandings

As the operator of ACTS, NASA may intervene or direct payload operations of the spacecraft at anytime. In recognition of this fiduciary responsibility, the Members agree to accept a NASA appointed liaison to the Consortium.

In the event that GRC's projected use of the spacecraft changes, the Consortium will be given 30 days notice to adjust the schedule. GRC retains usage priority of the test facilities and equipment and should a conflict arise, has sole discretion to exercise priority. Likewise, should a conflict arise between the Consortium and GRC, GRC in its sole discretion, shall determine the priority between the two users.

Title to ACTS will remain with the U.S. government. Title and use of other U.S. government furnished property (such as transportable ground hardware) is governed by the law, regulations, terms, conditions and agreements specified in the NASA Space Act Agreement.

The spacecraft is to remain at the 105.2 degrees West orbital location and no operations are permitted that will alter this location of the spacecraft.

NASA retains the right to remove equipment in support of Baseband Processing (BBP) operations, at its sole discretion, by issuing notice to the Consortium within 120 days prior to initiating its removal.

The Consortium may not use the ACTS to provide services that are generally and reasonably available commercially from the U.S. Private Sector or for any illegal activity.

Section 3 Membership

General Information

An organization may become a party to this Agreement and a Member of the Consortium by becoming a signatory to this Agreement, thereby agreeing to be bound by the provisions hereof in effect at the time of signature. Organizations desiring to join the Consortium after it is established may join at any time in accordance with the terms set forth in this Agreement.

Organizations interested in membership must provide written notification to the Managing Executive of their desired membership category. The Managing Executive will forward the request to the OCACT Council for determination by vote.

Membership Categories and Rights (see Section 6 for Membership Responsibilities)

There are three types of Consortium memberships available:

- Managing Member (Ohio University)
- Non-voting Memberships
 - for universities and not-for-profit entities are \$10,000 annually
 - for government agencies and for-profit entities are \$20,000 annually. Any member contributing at the non-voting level has access to operational data (read-only), and to satellite time that is otherwise unused.
- Voting Memberships
 - for universities and not-for-profit entities are \$25,000 annually, which includes 15 hours of satellite time. For government agencies and for-profit entities are \$50,000 annually, which includes 30 hours of satellite time.

Rights	Membership Category			
	Managing	Voting	Non voting	NASA Liaison*¹
Participation on the OCACT Council	Yes Two representatives	Yes One representative	No	No
Vote(s) for approval of the Annual Plan	Yes	Yes	No	No
Vote(s) for Consortium termination	Yes	No	No	No
Satellite Time	200 Hours	15 hours for universities; 30 hours for govt. & for profits	Based on availability of hours* ²	200 hours
Access to data	Operational data and limited command access* ³	Operational data and limited command access* ³	Operational, read-only data	

*¹ Although not a membership category per se, the NASA Liaison does have has certain rights, hence they are listed in the chart for clarity and completeness.

*² A minimum of fifty (50) hours are allocated to be shared among the non-voting university Members.

*³ As defined by the NASA Liaison.

Section 4 Annual Plans (Technical and Fiscal)

The purpose of the annual planning process is twofold: 1) to solicit, select and schedule technically feasible projects, and 2) to determine whether adequate funds have been committed to insure one year of continuous consortium activities. In addition, a Member's annual financial commitment must be made and paid within one month after completion of the annual plans and prior to the beginning of each year of Consortium activities.

Planning for the Technical Projects

During the annual planning process, technical and education projects will be solicited, selected and approved to be conducted by the Consortium. The Managing Member will develop and direct a process to result in a recommendation to the OCACT Council of the technical and education projects to be conducted.

All feasible projects that meet the use requirements of NASA and the Consortium will be accepted. The project must not violate the restrictions imposed or intent of the NASA Space Act agreement. If a proposal is rejected, it will be returned with an explanation of the reasons for rejection.

Planning for the Annual Fiscal Budget

Simultaneously with the annual technical project process, the Managing Member will develop and direct a process to result in a recommendation to the OCACT Council of the annual fiscal budget needed to manage the Consortium and execute the projects recommended in the Annual Technical Project Plan.

The Managing Member will include the following activities in developing and directing the annual fiscal process:

- Conduct an assessment of the estimated annual costs in cooperation with the NASA Liaison
- Collect fees from the charter, renewed or new Members
- Deduct the total amount of membership fees from the assessed estimated annual cost
- If the balance is negative, Members are invited to purchase additional satellite time at the rate of \$1,000 per hour or a rate determined by the OCACT Council
- When membership fees and payments for additional purchased satellite time match or exceed the assessed estimated annual cost, the Consortium starts or continues operations. Satellite time is allocated according to membership levels and the amount of additional satellite time purchased. In the event that there are surplus funds, the OCACT Council will decide whether to return the excess funds to the Members in proportion to their contributions, or retain the excess for contingency to be used to maintain and/or improve the ACTS system.
- During the annual planning process, the Managing Member may terminate the Consortium in accordance with Section 11 Termination.

Section 5 Intellectual Property

Title to inventions made and patents granted in the performance of Consortium activities will be owned by the inventing or patent holding Member.

Section 6 Responsibility

The responsibilities for the Consortium are as follows:

OCACT Council

The Council is comprised of the Managing Member; the Managing Executive (Ex Officio); university, government and for-profit voting Members; a representative from the OBR. The Council will:

- Provide business and technical strategic direction for the Consortium
- Act as a liaison to universities, for-profit entities, and government member organizations
- Arbitrate, or arrange for arbitration of member disputes
- Approve, by majority vote, applications for new memberships
- Approve, by majority vote, the Annual Technical Project Plan
- Approve, by majority vote, the Annual Fiscal Budget
- Accept or reject offers from non-member entities to purchase satellite time
- Execute or arrange for the execution of all Consortium responsibilities not designated to other individuals or entities.

OCACT Council Chair

The OCACT Council is led by the Council Chair, elected by nomination and majority vote from the membership of the OCACT Council. The Council Chair will:

- Arrange for and chair the OCACT Council's biannual meetings and publishing the minutes
- Act as the authorized spokesperson for the Consortium

Managing Member

- O.U. is the Managing Member and will:
- Execute the decisions of the OCACT Council
- Manage or arranging for the management of the Consortium
- Provide the GRC with funding in accordance with the schedule and estimates in Section 9 Finances
- Develop the process for and maintain the satellite time schedule
- Monitor resource allocation, including funds and satellite time, and specifically, the Consortium ground segments
- Develop and direct a process to result in a recommendation to the OCACT Council of both the Annual Technical Project Plan and the Annual Fiscal Budget

- Notify GRC, if appropriate, of the Consortium's intent not to utilize BBP operations
- Facilitate execution of the projects in the Annual Technical Project Plan
- Be the primary contact/interface to the NASA Liaison
- Employ a Managing Executive for executing day to day operations of the Consortium

Managing Executive

The Managing Executive will execute the day to day duties and operations of the Consortium in accordance with the direction given by the Managing Member.

Ohio University (OU)

Through a NASA Space Act Agreement with GRC, O.U. will provide access and use of the ACTS system to the Consortium in accordance with the terms and conditions set out in said Space Act Agreement. In addition, will reimburse to NASA the costs of operation and maintenance as specified in the Space Act Agreement.

The NASA Glenn Research Center (GRC)

Through a Space Act Agreement with the OBR and O.U. and in its capacity as the NASA Liaison to the Consortium, the GRC will

- Maintain the NASA Fixed Ground Station and its contracts for satellite and fixed NASA ground station operations support
- Provide maintenance support of the ACTS system the cost of which is not to exceed \$10,000 per month
- Provide civil service technical support and expertise on ACTS operations on an ad-hoc basis not to exceed 80 hours per month
- Provide the consortium with access to government equipment, documentation, and software for the development of payload and earth station usage in accordance with the accomplishment of the purposes of this agreement
- Appoint a NASA liaison to the Consortium.

Consortium Members

- Annually, each member organization must pay the required dues and renew its membership in writing
- Members agree to implement technical or education projects in accordance with the Annual Plan
- Honor all commitments
- Comply with reporting requirements

- Inform the Managing Member of an intent to use the BBP operation mode of the ACTS.
- Since export control laws of the U.S. Department of Commerce Department and the U.S. State Department are applicable to the operations and use of the ACTS, Members agree to comply with all applicable laws and regulations.
- Members agree to fulfill their annual financial obligation (including, but not limited to membership fees, cost of purchasing additional satellite time, and other pledged commitments) by remitting 1/12 of the total annual obligation per month for 12 months with the first payment due to the Managing Member within 14 days after execution of the Consortium Agreement or renewal of membership. Alternatively, one payment for the total annual financial obligation may be remitted by April 10, 2001 or within the first month of subsequent yearly renewals of membership.

Section 7 Key Contacts and Individuals

For the Consortium:

Dennis Irwin, Professor and Chair of the School of Electrical Engineering and Computer Science
Ohio University
Stockier Center 333,
Athens, OH 45701-2979
740-593-1566 Fax: 740-593-0007 dirwin1@ohio.edu

Hans Kruse, Associate Professor
McClure School of Communication Systems Management
Ohio University
Athens, OH 45701-2979
740-593-4891 Fax: 740-593-4889 hkruse1@ohio.edu

For the NASA GRC:

Robert Bauer, ACTS Project Manager and Access Programs
NASA Glenn Research Center MS 54-6
Cleveland, OH 44135
216-433-3431 Fax: 216-433-6371 Robert.a.bauer@grc.nasa.gov

Section 8 Reporting and Notifications

Annual plans to the GRC Space Communications Office by July 1 starting in 2001.

Notification to NASA of the Consortium's intent not to utilize BBP operations. Due upon the OCACT Council decision not to utilize BBP operations.

Consortium Operations Plan that defines the working relationship between the OCACT, OBR and NASA GRC. Due April 28, 2001.

Commercialization Reports. Due annually.

Section 9 Finances

Funding for the Consortium is derived from numerous sources, including but not limited to: membership fees, payments for additional satellite time, sale of excess satellite capacity, receipts from the repair and maintenance of ground equipment.

In the event that there are funds remaining at the end of the fiscal year, the OCACT Council will decide whether to return the excess funds to the Members in proportion to their contributions, or retain the excess for contingency to be used to maintain and/or improve the ACTS system (e.g. provide an ACTS contractor funds to research an anomaly).

In the event, and for any reason, the Consortium's expenses exceed its revenue and the Members do not purchase additional satellite time or make supplemental contributions to insure payment and continuity of Consortium activities, the Managing Member may terminate the Consortium in accordance with Section 11 Termination. In addition, if the funds available to the Managing Member for payment of Consortium debts and obligations (cash flow) is less than required to meet the Consortium's obligations, the Managing Member may terminate the Consortium in accordance with Section 11 Termination.

Funds Received

Members shall pay fees as indicated in Table 1.

Table 1 Annual Membership Fees*⁴			
Consortium Member and Satellite User Category	2001	2002	2003
Managing Member			
Not-for-Profit Member	Funds-in-kind		
Non-voting University Member	\$10,000		
Non-voting Government and Corporate Member	\$20,000		
Voting University Member	\$25,000		
Voting Government and Corporate Member	\$50,000		

Satellite User* ⁵ (Current Consortium members who purchase uncommitted satellite time)	\$ 1,000 per satellite hour
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*⁴ The full and complete cost of transporting, maintaining, modifying and repair of any government furnished ground equipment is the responsibility of the Member using the equipment and not included in the membership fee. In addition, Members are responsible for radio licenses of any ground stations not developed by the NASA ACTS program.

*⁵ An offer to purchase satellite time from a non-member entity must be accepted by the OCACT Council. However, the OCACT may reject the offer for any reason, charge additional fees, and or apply restrictions and conditions not applicable to Consortium Members. To be afforded the best use and price for access to ACTS, membership in the Consortium is recommended.

Funds Distributed

Consortium funds shall be distributed in accordance with Table 2, and with subsection A and subsection B.

TABLE 2				
Reimbursement to the OBR for the cost of operating the NASA ACTS				
Payment No. and Option Period		Estimated Amount \$	Due Date	Period it Covers
1	Initial execution – 6/30/01	439,000	Upon Signing	January 1, 2001- June 30, 2001
2	July 1, 2001 - June 30, 2002	338,000	June 29, 2001	July 1, 2001 – September 30, 2001
3	July 1, 2001 - June 30, 2002	335,000	Sept 13, 2001	October 1, 2001 – December 31, 2001
4	July 1, 2001 - June 30, 2002	350,000	Dec 13, 2001	January 1, 2002 – March 31, 2002
5	July 1, 2001 - June 30, 2002	360,000	March 14, 2002	April 1, 2002 – June 30, 2002
6	July 1, 2002- June 30, 2003	360,000	June 29, 2002	July 1, 2002 – September 30, 2002
7	July 1, 2002- June 30, 2003	366,000	Sept 13, 2002	October 1, 2002 – December 2002
8	July 1, 2002- June 30, 2003	366,000	Dec 13, 2002	January 1, 2003 – March 31, 2003
9	July 1, 2002- June 30, 2003	366,000	March 14, 2003	April 1, 2003 – June 30, 2003

The Managing Member, in accordance with, and after the approval by the OCACT of the Annual Fiscal Plan, may disburse the funds reasonably and necessary to:

- Manage the Consortium (included but not limited to expenses related to payroll, supplies, office leases, computers and software, consortium related travel, publicity and reporting).
- Maintain and/or improve the ACTS system.

Section 10 Liability

Each Member organization is responsible for its own performance of commitments and all and any costs, expenses or liabilities incurred by such Member in performance of its commitments. Each Member organization agrees to hold each other harmless against each other in accordance with the applicable state and federal laws that apply to the Member. Each Member organization agrees to hold NASA, the OBR, and OU harmless. Each Member organization agrees to assume responsibility for any facility or equipment damage it causes resulting from the activity conducted under the Consortium and agrees to pay all costs associated with the repair of such damage. Facility and equipment damage means any damage to U.S. Government facilities and equipment beyond the normal wear and tear reasonably to be expected as arising from the type of activity contemplated being conducted by the Consortium.

Section 11 Termination

Termination of Membership will occur upon any one of the following:

- Annual affirmation and payment of dues not made, or not made timely in accordance with Section 6 Responsibilities: Consortium Members.
- With 30 days notice to the Chair of the OCACT Council.
- By just cause determined by the Consortium (material breach and upon notice in writing and a reasonable opportunity to cure, the Member fails to remedy the breach).

Termination of the Consortium will occur upon any one of the following:

- By NASA or O.U. exercising the termination clause of the Space Act Agreement.
- By majority vote of the OCACT Council.
- By the Managing Member exercising the termination clause of the Space Act Agreement.

- By the Managing Member upon any one of the following conditions or situations:
 - when, during the annual planning process, the Member's annual financial commitments are less than the estimated annual budget assessed for Consortium operations.
 - when, in accordance with the results of the annual planning process, adequate funds are not remitted one month prior to the beginning of any year (i.e., 1/12 of the annual budget).
 - when the funds available to the Managing Member for payment of Consortium debts and obligations (cash flow) is less than required to meet the Consortium's obligations.
 - when, at any time, the Consortium's expenses exceed its revenue and the Members do not purchase additional satellite time or make supplemental contributions to insure payment and continuity of Consortium activities.

Section 12 Term of Agreement

This Agreement becomes effective upon the date noted in Section 15, and shall remain in effect for one year. This agreement may be extended by Members for up to three additional one-year option periods, for a total potential term of 4 years.

Section 13 Modifications

Any modifications or extensions to this Agreement shall be executed, in writing, and signed by each Member, possessing original or delegated authority to make such a commitment.

Section 14 Official Correspondence relative to the Consortium should be delivered to:

The Ohio Consortium for Advanced Communication Technology (OCACT)
Attention: Dennis Irwin
Stocker Center 333,
The Ohio University
Athens, OH 45701-2979

Section 15 Signatures and Dates of Consortium Members

This Agreement is dated this _____ day of _____, 2001

The Ohio University
Managing Member

Member

John A. Bantle
Vice President for Research

By: _____

Its: _____