

Exhibit A

Letter of Application

University Corporation for Advanced Internet Development (UCAID)
200 Business Park Drive, Suite 307
Armonk, NY 10504

ATTN: S. Pepe

Re: Abilene Connection Agreement

Dear *Dr. Rogers*,

We, SLR/SoX ("Connector") are (*check one*) an Abilene Participant Member of UCAID acting as its own Connector (), or a non-Member Connecting Gigapop acting as Connector for one or more Abilene Participants (). We understand that Abilene is an experimental high-performance backbone computer network that is part of the Internet2 project to serve the international research and education community with advanced network technology. We wish to assist in making the services of Abilene available to Abilene Participants and to join in the deployment of new services agreed on by the Internet2 community.

We agree to abide by the Abilene Terms of Connection. The Terms of Connection in effect as of November 1, 1998 are set forth below. This Abilene Connection Agreement includes the Terms of Connection and all Schedules required thereby.

We request that the connection(s) be established according to Schedule 2 attached, and we enclose a check for \$ _____ as a 10% deposit against the total Connection Fee for these connections, made payable to UCAID.

Previously executed by the CONNECTOR (SoX) and UCAID for SoX to become a Gigapop.

**ABILENE TERMS OF CONNECTION
EFFECTIVE NOVEMBER 1, 1998**

1. On or about the Connection Date specified by UCAID when countersigning this Connection Agreement, UCAID will attempt to provide the Connector with access to Abilene. UCAID does not guarantee that any Connector's access to Abilene will begin on its Connection Date.
2. Connectors are given access to Abilene so that they may route Internet protocol ("IP") packets among Abilene Participants. An Abilene Participant is a Member of UCAID that has entered into an Abilene Participation Agreement with UCAID. Each Connector must list the Participants to which it plans to provide connection services on Schedule 1. Schedule 1 requires the following additional information as to each such Participant:
 - a. Name:
 - b. Maximum bandwidth the Participant may direct to Abilene:
 - c. Planned Date for each Participant to be Connected to Abilene:

Connectors are required to notify UCAID of any changes in this Participant information.

3. Connectors have no rights to originate or receive any Abilene traffic other than traffic from or to IP addresses provided to the Connector and to UCAID by Participants listed by the Connector on Schedule 1, or such traffic as agreed to by UCAID for the purposes of managing the network.
4. Connectors are required to cooperate in the management of Abilene with UCAID via the Abilene Network Operations Center ("NOC") established by UCAID. Each Connector's cooperation shall include the following:
 - a. shall have a physical network infrastructure which enables Connector to implement the Terms of Connection and the Abilene COU, including the ability to forward only the traffic which is legitimate for Abilene and which only comes from Registered Participants.
 - b. during the application process and during subsequent operations Connector will work with the Abilene NOC to develop a mutual understanding of how routing to the participants occurs, and supplying the NOC with the necessary information to allow successful joint management of the network;
 - c. cooperation with UCAID in determining (i) whether violations of the Abilene Terms of Participation or the Abilene Conditions of Use have occurred or are occurring; and, if so, (ii) the Participants and IP addresses that are the source of such violations;
 - d. assistance to UCAID to prevent or cure violations of the Abilene Terms of Participation or Abilene Conditions of Use, including taking any actions directed by UCAID or the NOC;
 - e. at the direction of UCAID, disconnection of any IP address or Participant (such disconnection to be effected immediately upon such direction, even if such disconnection requires the disconnection of other users), such disconnection being necessary in UCAID's judgement to protect the network;

Exhibit A

- f. prompt notification to UCAID of any loss of service to any Participant, or any failure of the connection to perform as expected;
 - g. provision of maintenance services (including problem determination and correction, routing set-up and control, performance monitoring, and security management) 24 hours a day every day;
 - h. provision to UCAID of the name and contact information of a technical contact available at any time to discuss the operational characteristics of the network and any operational problems ("Technical Contact"), and prompt notification of changes in this information;
 - i. provision to UCAID of the name and contact information of a contact for all other matters relating to Abilene ("Executive Contact"), and prompt notification of changes in this information;
 - j. cooperation with UCAID in the introduction of modifications of Abilene, including any new features and any modifications required for the security and privacy of communications across Abilene; and
 - k. in general, cooperation with UCAID, the NOC, and the Participants in working toward the successful implementation of an end to end network using Abilene as its backbone.
5. Each Connector is responsible for the contractual and physical arrangements required to connect such Connector at its point of access to Abilene. UCAID will assist Connectors in arranging for connection but does not guarantee that connections will or can be made successfully or that any Connector will be able to reach agreement with the Abilene Access Provider (e.g. Qwest) regarding the provision of service.
6. Each Connector is responsible for providing UCAID with copies of the current versions of its contracts with Participants and all entities with which it contracts to implement its connection to Abilene or a written statement that Connector has in place the required agreements to enable it to fulfill Connector's responsibilities under this agreement.
7. Each Connector must set forth the expected specific characteristics of each of its connections to Abilene on Schedule 2. Schedule 2 requires the following information: the Location of the Access Node, the name and contact information of the Local Loop Provider, the starting date of the Local Loop connection, the requested date of the Abilene connection, the maximum bandwidth of the Abilene connection, and the framing of the Abilene connection. The Connector is responsible for updating this information as needed.
8. Connector Technical Contact and Executive Contact information are to be shown on Schedule 3, which is to be delivered to UCAID. The Connector is responsible for updating this information as needed.
9. Each Connector must pay UCAID a Connector Fee as shown on in Schedule 4. A deposit payment of 10% of the Connector Fee must accompany each Connector's signed Abilene Connection Agreement. The balance of the fee is due within 30 days after the Connection Date assigned by UCAID. The fee for each subsequent year will be payable before each anniversary of the Connector's Connection Date, unless either the Connector or UCAID has given notice of termination at least 90

Exhibit A

days before the anniversary of the Connection Date. In the event that Connector withdraws without completing the connection or paying the full fees, it may forfeit the deposit. UCAID will use its judgement to decide whether any refund should be made.

10. Connectors are obligated to use their best efforts to maintain the connection between Abilene and their Participants continuously at all times at which Abilene is available to such Participants. Connectors are obligated not to violate or tamper with the security of any Abilene or Participant equipment or program.
11. Connectors are obligated to notify the NOC promptly of any known or suspected breach of or challenge to Abilene security or any known or suspected unauthorized use of a Connector's facilities to access Abilene.
12. Connectors are obligated to route traffic from non-Abilene Participant addresses or addressed to non-Abilene Participant addresses over networks other than Abilene.
13. Any Abilene Connection Agreement may be terminated at any time by either the Connector or UCAID, with or without cause, by notice to the other via fax or letter mail. In the event of termination, a Connector will cooperate with UCAID in good faith with respect to any transition arrangements requested by UCAID. No fees will be refunded by UCAID to a Connector in the event of termination.
14. UCAID may modify these Terms of Connection at any time and from time to time without prior notice to any Connector. UCAID will email to Connector's Executive Contact notice of any change to these Terms of Connection, and each Connector's use of its connection to Abilene after UCAID has posted any such modification on the Abilene website will constitute its continuing agreement to the Terms of Connection as so modified. Subject to the transition provision set forth in Section 13, each Connector has the right to terminate its connection to Abilene at any time if the Terms of Connection are modified in a way that is not acceptable to Connector.
15. A Connector may not assign any of its rights or obligations under its Abilene Connection Agreement to any other person without UCAID's written consent. Abilene Connection Agreements are governed by New York law. In the event of a dispute, the Connector and UCAID are required to negotiate in good faith for 60 days, and if the dispute is not resolved by such negotiation, to arbitrate the dispute before a single arbitrator in Washington, D.C.
16. Because of the experimental nature of Abilene, UCAID reserves the right to interrupt or terminate service to any Connector, any Participant, or any other person, without prior notice, at any time, and for any reason or without stating any reason. NOTWITHSTANDING ANY OTHER PROVISION OF THESE TERMS OF CONNECTION, UCAID SHALL NOT BE LIABLE TO ANY CONNECTOR, PARTICIPANT, OR OTHER PERSON FOR ANY ERROR IN TRANSMISSION OR FOR ANY INTERRUPTION OR TERMINATION OF PARTICIPATION, EITHER PARTIAL OR TOTAL, EITHER INTENTIONAL OR ACCIDENTAL (INCLUDING ANY ERROR, INTERRUPTION OR TERMINATION DUE TO THE DELIBERATE MISCONDUCT OR NEGLIGENCE OF ANY PERSON), WHETHER OR NOT PRIOR NOTICE OF ANY SUCH INTERRUPTION OR TERMINATION HAS BEEN GIVEN. Without limiting the generality of the foregoing, UCAID shall have the right, without notice, to interrupt, suspend, or reduce the operation of Abilene, in whole or in part, to any Connector (without regard to whether service is interrupted, suspended, or reduced to any other Connector) for any reason UCAID in its sole discretion deems sufficient.

Exhibit A

UCAID will endeavor where reasonably possible, but does not promise, to provide advance notice to Connector of any such interruption, suspension, or reduction.

17. ABILENE IS PROVIDED ON AN AS IS, AS AVAILABLE BASIS, WITHOUT WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. UCAID EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY THAT ABILENE WILL BE ERROR-FREE, SECURE, OR UNINTERRUPTED. NO STATEMENT, ORAL OR WRITTEN, GIVEN BY UCAID, ANY OF ITS EMPLOYEES, OR ANY OTHER PERSON WILL CREATE A WARRANTY, NOR MAY ANY CONNECTOR, PARTICIPANT, OR OTHER PERSON RELY ON ANY SUCH STATEMENT FOR ANY PURPOSE.
18. Each Abilene Connection Agreement comes into force on its Connection Date and remains in force for one year and from year to year thereafter unless either UCAID or Connector notifies the other to the contrary at least 90 days before the anniversary of the Connection Date.
19. Each Abilene Connection Agreement, including the Terms of Connection and Schedules and its remaining attachments, constitutes the entire understanding between a Connector and UCAID with respect to Connector's connection to Abilene and supersedes any prior understanding or agreement, written or oral, between the Connector and UCAID respecting that subject matter. No other representation or other statement, written or oral, is binding on Connector or UCAID.

SCHEDULE 1

PARTICIPANTS USING CONNECTOR AS THEIR CONNECTION TO ABILENE

[TO BE PROVIDED BY CONNECTOR; ONE PAGE FOR EACH PLANNED PARTICIPANT]

- a. Name of each Participant:
- b. Maximum bandwidth each Participant can direct to Abilene:
OC3 () OC12 () Other
- c. Planned Date for this Participant to be Connected to Abilene:

EACH PARTICIPANT MUST BE A PARTY TO AN ABILENE PARTICIPATION AGREEMENT WITH UCAID

SCHEDULE 2

REQUESTED CONNECTION TO ABILENE

[TO BE PROVIDED BY CONNECTOR; ONE PAGE FOR EACH REQUESTED CONNECTION]

1. Location of the Abilene Access Point:
2. Means of Connecting to Abilene Access Point:
Either Name of the Local Loop Provider:
Or Brief summary of proposed connection
3. Actual or anticipated Start date of the Local Loop connection:
4. Requested Date of Abilene Connection:
5. Maximum bandwidth of the Abilene connection:
OC12c () OC48c ()
6. Framing of the Abilene connection:
POS () ATM ()

SCHEDULE 3

TECHNICAL AND EXECUTIVE CONTACTS

[NAME AND CONTACT INFORMATION TO BE PROVIDED BY CONNECTOR]