MEMORANDUM OF UNDERSTANDING

Research Cyberinfrastructure (RCI) Condo Computing Program

University of California, San Diego

This memorandum of understanding ("MOU") constitutes the agreement of _____ ("User") to participate in the RCI Condo Computing Program ("Program"). This program is administered by the San Diego Supercomputer Center ("SDSC") on behalf of UCSD's RCI program.

The parties agree as follows:

1. Program Description

The RCI Condo Computing program provides for participation in a "community" research computing cluster called the Triton Shared Computing Cluster (TSCC). User participates in the program by purchasing computing "nodes" or servers that are added to the cluster and operated/administered by SDSC on behalf of the user. User's nodes may remain in the cluster for up to four years (three years under warranty and one year out of warranty). A more detailed description of the program is available at http://rci.ucsd.edu/computing/index.html and is incorporated in this MOU by reference.

2. Term and Termination

The term of this agreement is from _____ through _____.

User's purchased hardware is covered under warranty for the first three years of the agreement. User may leave out-of-warranty hardware in the system for one additional year provided it remains operational and annual operations fees are current. Failed hardware will be disabled or removed from the system.

Upon expiration of this agreement, User may take possession of purchased hardware or authorize SDSC to turn it over to UCSD Surplus for further disposition.

User may take possession of purchased hardware at any time prior to expiration of the agreement, but removed hardware cannot be reinstalled in the system at a later date. Prorated refund of operations fees to be handled on a case-by-case basis.

3. Purchase of Computing Hardware

User agrees to purchase computing hardware at the quantity and costs summarized in Attachment A. SDSC will purchase and take delivery of the hardware on behalf of User. User must provide SDSC business contact with an index number and equipment custody code prior to purchase.

User agrees to additionally pay the required per-node, one-time "infrastructure fee" identified in Attachment A. The infrastructure fee covers common components that are required within the cluster such as node enclosures, network switches, home directory storage, and parallel file system. An additional infrastructure fee is required for the high

performance Infiniband network option. NOTE: Infrastructure fees are classified as "Supplies" for cost accounting purposes and may incur indirect cost burdens on cost-reimbursable contracts and grants.

4. Payment of Annual Operations Fees

User agrees to pay an annual operations fee for each of the User's nodes in the cluster. The annual fee is summarized in Attachment A. The operations fee is used to offset the costs of running and administering the cluster, such as system administrator labor costs, data center co-location, utilities, and software license fees. Currently, the RCI subsidizes the annual operations fee in the amount of approximately $1,300 per node per year.

SDSC will invoice User monthly for the operations fee. NOTE: The operations fee is classified as Computer Services for cost accounting purposes and will incur indirect cost burdens on cost reimbursable contracts and grants.

5. Delivery of Services

User will be entitled to an annual amount of computational runtime as shown in Attachment A for the duration of the agreement as long as operations fees are current.

The annual service units may be used on any nodes at any time during the year; however, unused service units expire at the end of each program year.

General Purpose service units must be used on General Purpose Nodes and GPU service units must be used on GPU nodes; due to technical reasons the two are not interchangeable.

User's computing jobs requiring a number of cores less than or equal to the number of purchased cores are guaranteed to start within eight hours of submission and may run for an unlimited period of time. User's jobs that require the common nodes ("hotel" nodes – see Program Description) must share a queue with other users and are limited to a 72-hour runtime.

User may also submit "gleaning" jobs to run on idle compute nodes throughout the cluster. Such jobs are <u>not</u> charged against User's service unit balance but are subject to <u>immediate preemption</u> by higher priority jobs.

6. Operations and Technical Support

TSCC is operational and available for remote access 24/7, but help desk is staffed for issue resolution during normal business hours only (Pacific time zone). Technical problems, including system outages, may take longer to resolve if occurrence is during weekends or holiday periods.

Application level technical support (programming advice, debugging user codes, porting codes, etc.) is provided on a "best efforts" basis. SDSC staff may be available to provide extensive application-level support as a separately funded effort.

Support requests may be submitted to the following email address: support@sdsc.edu.

7. Points of Contact

Overall Program:	Invoicing & Payment:	General Inquiries:	Technical Support:
Ron Hawkins Tel 858-534-5045 Email: rhawkins@sdsc.edu	Kelly Hudson Tel 858-822-5447 Email: k1hudson@sdsc.edu	Email: support@sdsc.edu	Email: support@sdsc.edu

[Name of PI, dept, lab, or project]:   San Diego Supercomputer Center:

By: _____   By: _____

Name: _____   Name: _____

Title: _____   Title: _____

Date: _____   Date: _____

ATTACHMENTS:

A. Budget Estimate for RCI Condo Computing Participation