Report
to
The LEGISLATIVE FINANCE COMMITTEE

Department of Information Technology
Supercomputer and New Mexico Computing Applications Center
May 12, 2009

Report # 09-06

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EXECUTIVE SUMMARY

A supercomputer is a larger, faster and more powerful computer used to solve complex and multi-faceted problems.

At least 14 states have supercomputers mostly affiliated with institutions of higher learning.

New Mexico's supercomputer is ranked 12th fastest in the world, down from third fastest when purchased in fall 2007.

The supercomputer vendor offered a 60 percent discount on hardware and Intel offered to host the supercomputer at no cost.

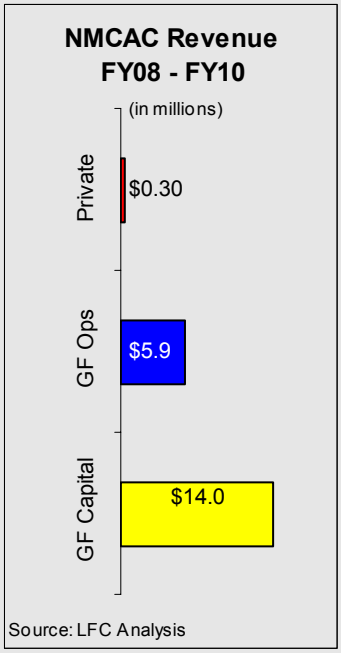
Self-sufficiency cannot be attained by giving away 60 percent of the supercomputer capacity. The research universities, national laboratories and state government will each get 10 percent of the capacity.

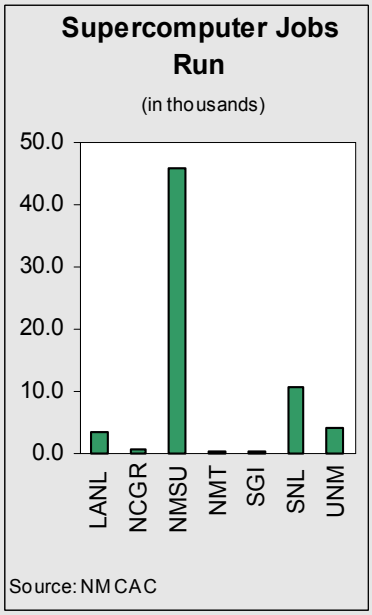
Background. The purpose of this status review is to report on the Department of Information Technology's (DoIT) purchase of the supercomputer, the establishment of New Mexico Computing Application Center (NMCAC) as a nonprofit entity, the appropriation and expenditure of state funds, and earnings from non-state revenue so that NMCAC can achieve self-sufficiency.

The governor's science advisor requested $42 million over six years for a supercomputer; a 40,000-square-foot building to house 200 people; and gateways sites across New Mexico. The first-year request for $20 million was for the supercomputer, for smaller versions of the supercomputer for universities, and for first-year operating expenses. The Legislature appropriated $14 million. In October 2007, DoIT issued an $11 million contract to buy the supercomputer. The contract included a $2.7 million performance bond and the requirement for a 20 percent retainage.

Vendor Selection And Supercomputer Procurement. SGI, a vendor just emerging from bankruptcy in 2007, was selected to supply the supercomputer before the request for proposal (RFP) was issued. Since the vendor was pre-selected, the evaluation of the RFP responses was a formality. Nevertheless, company financial stability, a mandatory RFP requirement, was not included in the evaluation committee's report. Additionally, it did not even raise a "red flag" about the company's disclosure that it was emerging from bankruptcy. According to the General Services Department State Purchasing Division, the state does not have the expertise necessary to evaluate financial stability. SGI filed for Chapter 11 bankruptcy the first week of April 2009, less than two years after the supercomputer was purchased and less than three years after emerging from bankruptcy. The U.S. Bankruptcy court accepted an offer from Rackable Systems, Incorporated, to acquire most of SGI's assets for $42.5 million cash. The Attorney General and DoIT's general counsel are monitoring the proceedings.

Continuing As A Going Concern Is Questionable. NMCAC's ability to continue as a going concern is in question. "Going concern" is the business concept that an entity will continue to operate indefinitely, and will not go out of business and liquidate its assets. For an entity to continue as a going concern, it must be able to generate or raise enough resources to remain operational. The *Business Plan* proposes a sustainable business model that is a combination of commercial, foundation, federal, and state funding. However, NMCAC is totally reliant on state appropriations of which it has received $16.8 million and spent and encumbered $13.8 million in FY08 and FY09.





The attorney's hourly rate of $250 is between $76 and $100 higher than state agencies pay for similar services.

Revenue. Non-state revenue is not materializing as projected. The *Specific Benefits to NM from NMCAC* shows revenue to the state for FY09 at $3 million; however, almost $2 million is actually in-kind contributions. Of the 10 revenue-generating prospects identified in November 2008, only one has generated $300 thousand.

Use of the supercomputer is not currently generating any revenue nor is there a rate structure to charge users. An enterprise operation cannot be self-sufficient if 60 percent of available capacity is given away. The three research universities, two national laboratories, and one nonprofit have used the supercomputer at no cost since July 2008.

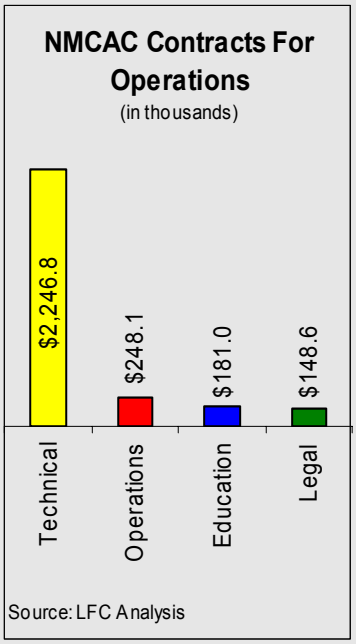
Expenditures. NMCAC does not have a clear grasp of its future expenditures. For example, the supercomputer is hosted at Intel at no cost. However, staff does not know when the no-cost arrangement will end or if the $1.2 million estimate is a valid number that can be used in projecting expenditures. NM Tech was supposed to provide an education director at no cost on a half-time basis; however, in March 2009, NMCAC signed a $131 thousand contract retroactive to July 1, 2008, for those services.

The *NMCAC Business Plan* proposes 44 distributed videoconferencing sites or gateways across the state to promote the higher and public education innovative digital education and learning (IDEAL) initiative. If a vendor is selected in FY10 and equipment is installed at the first 15 sites, the current operating budget does not have sufficient funding to support those sites. The General Appropriation Act of 2009 includes $3 million for staff and operational costs. NMCAC will have $913 thousand to operate after it pays for maintenance and support of the supercomputer.

With regard to current expenditures, there are five contracts of concern.

- UNM's accounting services ($50 thousand) duplicates the operations manager contract ($18 thousand).
- The part-time education director ($131 thousand) is also a full-time professor.
- The chief operating officer's contract was not amended before the "not to exceed" limit was surpassed by $30 thousand.
- The legal services procurement is discussed below.

Two separate contracts for legal services from one attorney were issued, one through DoIT and the Governor's Office and the other through UNM. The total compensation for the attorney under both contracts is now $148 thousand, which requires a bid. The second contract deemed a sole source was an extension of the state contract. A state contract cannot be amended or extended by an educational institution or a nonprofit even if the funds are from the same source. The justification



Hiring a part-time term attorney would have saved the state almost $90 thousand.

The two private sector board members present at least a perception of a conflict of interest since they represent Intel (supercomputer hosting site) and Cerelink (private company intermediary).

NMCAC did not submit its application to IRS until late April 2009 even though NMCAC was represented to be a 501(c)(3) tax-exempt non-profit entity.

for the second contract was that the attorney had "experience and skill sets necessary go beyond substantive and procedural requirements (and) they require knowing state procurement regulations and procedures." A review of the attorney's invoices found that

- Invoices are sufficiently vague to allow for payment yet not explain what exact services were provided.
- The attorney requested and was paid to review and summarize his own contract, negotiate a contract for his associate (cost for those services are already part of the contract), answer questions about his invoices, and prepare and submit monthly invoices.

Although there is no case law in New Mexico, the Maryland Court of Appeals upheld the lower court's decision that the practice of charging clients for accounting services was unreasonable and a violation of the code of professional ethics.

NMCAC has no full-time permanent staff. Since July 2008, its part-time contracted staff has cost $358.4 thousand. The bulk of the appropriation for operations goes to pay for the maintenance and support of the supercomputer ($2.1 million).

Incorporation and Tax Exempt Status. NMCAC was formed under the University Research Park and Economic Development Act by the University Research Consortium (UNM, NMSU, and NM Tech) on July 3, 2008 as a standalone nonprofit not directly affiliated with any of New Mexico's research universities. University research parks have traditionally been a mechanism for research universities to grow technology-based knowledge economies. According to *A Resource Guide for Technology-based Economic Development* prepared for the US Department of Commerce, research universities have been most effective in launching and supporting knowledge economies.

NMCAC's current structure is neither transparent nor fluid. The operations are split between a state agency (DoIT) and the nonprofit with a university in the middle serving as the flow-through funding mechanism. The structure requires varying accountability decided by the laws, rules, and policies of each entity. In 2009 the New Mexico Research Application Act (Chapter 66) was signed into law as a response to NMCAC's request for a mechanism that would allow revenue generated to flow back to NMCAC and not the state general fund. The new law is very similar to the University Research Park and Economic Development Act and may not address the issue they were attempting to resolve. By way of contrast, the Economic Development Corporation Act created the New Mexico Partnership whose structure allows state appropriations to flow directly to it.

NMCAC's plan and policies must address the core principles of information security: confidentiality; integrity; and availability.

NMAC should consider a thorough security assessment before all users are allowed to use the supercomputer.

The LFC evaluator in charge of this status review was Aurora B. Sánchez, IT Program Evaluation Manager.

The Pre-hearing meeting was held May 6, 2009 at LFC with Edmundo Gonzales and Sue DeVore. Telephonic discussion was held on Mary 7, 2009 with Marlin Mackey, DoIT Secretary.

Next Steps. It has been almost three years since NMCAC and buying the supercomputer were first proposed and one year since the incorporation. Officials involved with NMCAC may want to

- Revisit the sustainability model in light of the economic downturn and lack of staff to support users.
- Enter into memoranda of understanding with the universities and national laboratories codifying the exchange of supercomputer time for staff expertise.
- Determine if and when Intel will no longer provide free hosting services; then enter into a contract for those services at a firm fixed price.
- Re-evaluate how the gateways will be supported without any funding.
- Establish a written rate structure for supercomputer users to begin generating revenue.
- Establish one accounting system to track revenues and expenditures and renegotiate or eliminate the UNM contract.
- Monitor expenditures closely to ensure that contract limits are not exceeded.
- Require more detailed invoices from the attorney and request reimbursement for non-client-related services.
- Consider a security assessment to ensure confidentiality, integrity, and availability.
- Revisit the University Research Park and Economic Development Act, the Research Applications Act, and the Economic Development Corporation Act to determine which will provide the best structure for a public-private partnership.
- Consider divesting the state of the supercomputer if NMCAC cannot become a going concern.

Supercomputers. A supercomputer is much larger, faster and powerful than one found on a desktop. It is used to solve complex and multi-faceted problems in areas such as climate research, astronomy, aerodynamics, medicine, pharmacology, nuclear science, or military science.

Other states with supercomputing centers have been funded by the National Science Foundation, the Department of Defense and other federal sources. Twelve of the 14 supercomputing or high-performance computing centers researched were located on or affiliated with a state university and two provided services to higher education and elementary and secondary schools. Supercomputer centers in Ohio, Illinois, Minnesota, and Pittsburgh have all had some legislative support. Ongoing support for these centers included a mix of federal, state, (state) university, and (enterprise) fee funding. These supercomputer centers conduct unclassified state university-related research. Supercomputing centers in Pennsylvania, Texas, and Virginia were funded by the National Science Foundation. **Appendix A** shows centers in other states, initial funding and recurring costs, and supercomputer size.

New Mexico's proposal for its own supercomputing center is not unique. At least three other centers in the United States – Ohio, North Carolina and Louisiana – have similar missions, which include partnering with business and industry to drive economic growth. The governance structure for the New Mexico Computing Application Center is a hybrid of the structure in Alabama and Minnesota: a separate public corporation with the New Mexico University Research Consortium as its sole member.

GOVERNOR'S SUPERCOMPUTER INITIATIVE.

The New Mexico Computing Application Center (NMCAC) was initially proposed by the governor's technology (science) advisor in fall 2006 with a vision of "creating high tech jobs in New Mexico enabled by scientific computing." NMCAC would host one of the world's fastest unclassified computers. At the time of the proposal, New Mexico had supercomputing facilities at the University of New Mexico (UNM), Los Alamos and Sandia national laboratories and access to the University of Hawaii's Maui facility.

Capital and Operational Funding Request. A $42 million request to fund the governor's initiative was proposed to the Legislature in 2007. NMCAC's mission is to "stimulate business growth, enhance science and engineering interest and opportunities in K-12, promote high-tech jobs and elevate New Mexico's national and international profile." NMCAC's focus would be on national issues.

The governor's science advisor requested $42 million over six years for a 200-teraflop (200 trillion calculations per second) supercomputer; a 40,000-square-foot building to house 200 people; gateways at Los Alamos National Laboratory (LANL), Sandia National Laboratory (SNL), New Mexico State University (NMSU), and New Mexico Institute of Mining and Technology (NM Tech); as well as connections to other facilities in New Mexico. For FY08 the cost of the supercomputer was estimated to be $13 million, with building and equipment, including power, priced at $5.3 million and staffing at $1.5 million. The capital request included

a letter dated January 4, 2007, from Intel informing the governor that it would "commit to hosting the initial computational resources at its Rio Rancho facility (Fab7) at no cost to the state to ensure rapid establishment of the NMCAC." The governor's science advisor valued the Intel site at $2.5 million per year. The supercomputer vendor offered a 60 percent savings over the best national rate on computer hardware. Of the $42 million capital request, $20 million was required the first year for the supercomputer, for smaller versions of the supercomputer for NMSU and NM Tech, and for first-year operating expenses. The table below summarizes the first request for funding.

Table 1. 2007 Capital Request
(in millions)

2007 Start-up Funding Request	**$20,000.0**
Capital: $17.7M NMSU/NM Tech Gateways $ 4.7 million Intel Computing Capacity $13 million **Recurring: $2.3M**	
Additional Five-year Funding (gradually decreases over five years)	$22,000.0
Total Six-Year Funding	**$42,000.0**

Source: Governor's Science Advisor

NMCAC was to be organized as a nonprofit with tax exempt status under Internal Revenue Code 501(c)3 and was expected to be self-sustaining in five years if the state provided funding for construction and operations for the first five years. The $42 million state investment was to be used to leverage $250 million from other sources and in-kind contributions.

In June 2007, the governor issued Executive Order 2007-34 that established the NMCAC advisory committee. The Executive Order

- Proclaimed New Mexico an international leader in the development and use of supercomputing applications;
- Stated that the national laboratories, universities and private technology companies were uniquely suited to collaborate;
- Proclaimed that supercomputing applications would enhance the state's efforts to build a high-wage economy; support national defense; improve the health, safety and welfare of all New Mexicans; address important issues and needs; and promote economic development, education, and workforce development.

The voluntary advisory committee was to remain in effect not more than two years to develop recommendations for the creation and operation of NMCAC, develop recommendations for increasing high-tech economic development, enhance real-world educational opportunities, and examine and develop a model for future collaboration. The committee's membership is made up of representatives from state government, universities, colleges, national laboratories, and the private sector. The Department of Information Technology (DoIT) was named the state agency to provide staff and support to the committee. The committee was to make recommendations to the governor in priority order.

New Mexico Computing Application Center. The *NMCAC Business Plan* (Plan) dated November 2007 identifies three important characteristics of NMCAC:

- World-class talent from national laboratories and universities,
- More than 40 gateways planned around New Mexico and connected through LambdaRail and Wire NM, and
- The most powerful computing systems in the world.

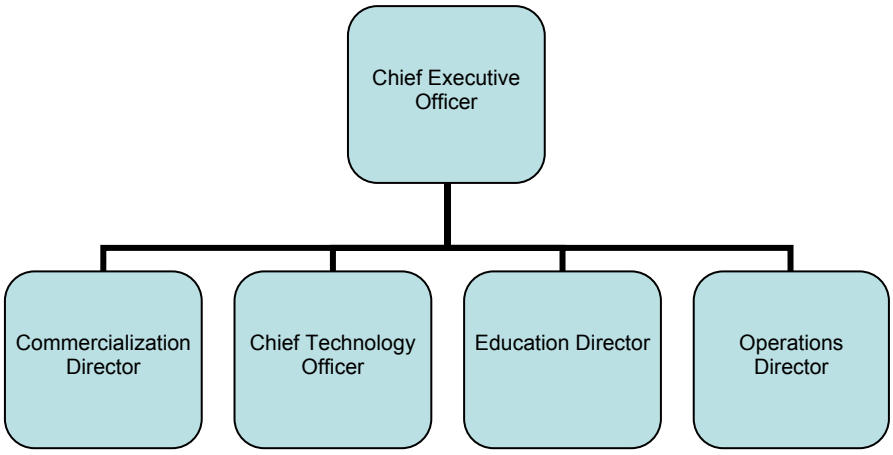
The Plan includes market sectors on which NMCAC will focus based on the market analysis. The first two were chosen for their robust market dynamics and because of the resident professional expertise in the state.

- Health, medical, bio-medical/technical, pharmaceutical,
- Financial investment,
- Energy and environment.

The economic development model for attracting companies to New Mexico is based on the state's intellectual assets and not the supercomputer's power. The national laboratories are cited as examples of partnerships with for-profit companies. The difference between NMCAC and the national laboratories is that the laboratories are fully staffed and have the computing power whereas NMCAC has a powerful machine with no staff.

The Plan lays out the organizational structure as shown in the figure below.

Figure 1. NMCAC Proposed Organizational Structure



Source: NMCAC Business Plan 2007

The chief executive officer is responsible for overall activities, the commercialization director is responsible for developing formal relationships with business and industry, the chief technology officer and education director are responsible for research and education, and the operations director is responsible for physical and cyber infrastructure. DoIT is identified as the state agency responsible for overseeing and keeping NMCAC accountable. Negotiations are underway on specific agreements regarding the supercomputer in areas such as maintenance and security.

According to the fact sheet posted on NMCAC website, the supercomputer is available to federal institutions, other states, and private companies to run their own applications or develop new ones. NMCAC is committed to supporting the state's education and health initiatives, as well as economic development. NMCAC is not focused on selling cycles, but on developing relationships with companies and organizations by providing applications solutions using the institutions' expertise.

Currently, NMCAC has no full-time staff. It has contracted for the services of a chief operating officer, operations manager, project manager, and education director. Others providing assistance are on loan from various organizations. The NMCAC website identifies the management as shown in the table below.

Table 2. NMCAC Staff

Name	Position	Status
Edmundo Gonzalez	Chief Operating Officer	Contractor
Tom Bowles	Science Advisor	Loan from LANL
Lenny Martinez	Market Development Advisor	Loan from SNL
Lorie Liebrock	Education Director	Loan from NM Tech and contractor
Mary Ann Scott	Education Outreach Coordinator	Contractor
Stephan Helgesen	Client Services Director	Loan from Economic Development Department

Source: www.newmexicosupercomputer.com

Note: The list on the website does not include the operations or project managers.

As of February 2009, the New Mexico's supercomputer is ranked 12th fastest in the world, down from third fastest when purchased in fall 2007. LANL has the fastest computer in the world and SNL has the ninth fastest. **Appendix B** shows the top 20 fastest supercomputers in the world.

Supercomputer Security. Information systems security is the process to ensure that information systems assets (physical and logical) are secure. Effective security is comprehensive and takes into consideration confidentiality, integrity and availability. The process begins with a written security plan and policies. The plan and policies should include physical security over personal computers, laptops, servers, telecommunication/networks, documentation, etc. and logical security, which includes data, information, networks, and software.

NMCAC staff was unable to provide a written plan or policies that delineate supercomputer security. NMCAC staff provided summaries of how security over the supercomputer is anticipated to work. Access to supercomputer is restricted using physical security policies and procedures setup and controlled by Intel. UNM controls access to the firewall with a security guard, badge reader and an alarm because the facility belongs to UNM. Logical security is based on a tiered approach.

NMCAC's plan and policies must address the core principles of information security: confidentiality (preventing disclosure of information to unauthorized individuals or systems); integrity (data cannot be modified without authorization); and availability (the information/system must be available when it is needed). Additionally, NMAC should consider a thorough security assessment before all users are allowed to use the supercomputer.

Report Distribution. This report is intended for the information of the Office of the Governor, the Department of Information Technology, the Economic Development Department, the New Mexico Computing Application Center, the Office of the State Auditor, and the Legislative Finance Committee. This restriction is not intended to limit distribution of this report which is a matter of public record.

Manu Patel
Deputy Director for Performance Audit

SUPERCOMPUTER PROCUREMENT

Vendor Selection. SGI, a vendor just emerging from bankruptcy in 2007, was pre-selected to supply the supercomputer (RFP was issued after the vendor was selected). SGI received the highest overall score of the four responses to the request for proposals (RFP) for the supercomputer. With the additional 10 points for the oral presentation, it received 903 points out of a possible 1,000. Along with high marks for company and staff experience, the company also received a perfect score for installation and initial testing, site selection and support, acceptance testing, increased performance and support, and exemplars. The company also received additional points for value-added services including free public relations, new technologies, and updates for the new technologies, NMCAC marketing, new equipment, performance testing, and data center development assistance. The table below shows the ranking of the responding vendors.

Table 3. Evaluation Scores
Supercomputer Vendors

Possible Score 1,000	
Company	**Total**
SGI	903
SI Corp	650
TIG	701
Sun	515

Source: General Services Department Procurement File

The evaluation of the company's financial stability was a mandatory requirement in the RFP, but the evaluation committee report did not include a score regarding this topic or discussion raising a "red flag" even though the company disclosed that it was emerging from bankruptcy. According to the General Services Department State Purchasing Division, even though financial statements are a mandatory requirement in the RFP, those are not included in the scoring because no one in the state has the expertise necessary to evaluate them. A review of the financial information submitted by SGI as part of the response to the RFP shows that

- SGI implemented restructuring actions in fiscal year 2002 and continued to restructure through fiscal year 2004.
- In fiscal year 2005, auditors stated the financial conditions of the company "raised substantial doubts about SGI's ability to continue as a going concern."
- By the end of fiscal year 2006, the company had filed a voluntary petition seeking reorganization under Chapter 11 of the U.S. Bankruptcy Code.
- SGI emerged from bankruptcy in October 2006.

Other research shows that SGI's stock was delisted from the New York Stock Exchange in 2005 because its stock value fell below $1. According to a 2006 news article, the company had been losing favor with investors since the 1990s.

SGI filed for Chapter 11 bankruptcy the first week of April 2009, less than two years after New Mexico purchased the supercomputer and less than three years after emerging from bankruptcy.

The filing in the New York bankruptcy court records listed Intel Americas as one of its largest creditors. The U.S. Bankruptcy court on Friday, May 1, 2009, accepted an offer from Rackable Systems, Incorporated, to acquire most of SGI's assets for $42.5 million cash. The liabilities Rackable is assuming have not been detailed. The New Mexico Attorney General's Office and the DoIT general counsel are closely monitoring the bankruptcy proceedings.

Supercomputer Contract. On October 31, 2007, DoIT signed the $11 million contract to buy a 172-terabyte supercomputer, including testing and acceptance, connection to LambdaRail, and physical site setup. Although the vendor was paid for site selection, Intel had committed itself to providing free hosting for the supercomputer six months before the request for proposal was published and seven months before the evaluation committee recommended the SGI/Intel partnership to provide the supercomputer and hosting site. Intel's hosting offer and SGI's hardware discount gave the partnership an unfair advantage over other potential bidders.

The contract with SGI called for a 20 percent retainage on all fixed-priced deliverables to ensure the state received fully functioning deliverables. DoIT withheld $1.7 million as retainage on two deliverables, which was released to the vendor when the system was accepted. The contract also required a performance bond of $2.7 million, posted on November 15, 2007. DoIT fully accepted the supercomputer on June 20, 2008, at which time the performance bond was also released. On June 23, 2008, DoIT requested that SGI continue the test phase after the supercomputer was fully accepted and the performance bond was released because "the state was working on establishing the New Mexico Computing Application Center as a stand alone entity to operate Encanto (name of the supercomputer)." Although the records do not include a response from SGI, the supercomputer continues to operate in a test phase, despite full acceptance and payment. If the supercomputer was still being tested, then the performance bond would not have been released, the retainage would not have be paid, and no money would have been expended on maintenance and support. In the continuum of system development or product implementation lifecycle, the test phase cannot continue if the product has been fully accepted and paid for, and the maintenance phase has started. The supercomputer has been in production since June 2008, and the state has paid almost $2.2 million for maintenance and support.

ENTITY SUSTAINABILITY AND SELF-SUFFICIENCY

"Going concern" is the business concept that an entity will continue to operate indefinitely, and will not go out of business and liquidate its assets. For an entity to continue as a going concern, it must be able to generate or raise enough resources to stay operational. NMCAC's ability to continue as a going concern is in question. According to the authors of the *NMCAC Business Plan*, "No high performance computing center anywhere has ever become financially self-sustaining through business formation, which would be the most compelling metric."

Sustainable Revenue Model. The *NMCAC Business Plan* proposes a sustainable business model that is a combination of commercial, foundation, federal, and state funding. The Plan anticipates a significant part of the funding will come from overhead from federal grants. Relying on overhead from federal grants assumes that NMCAC can provide member institutions cheaper computing resources. Currently, NMCAC is totally reliant on state appropriations. The Plan also calls for the Legislature to create a funding bill that provides for revenue generated to flow back to NMCAC and not the (state) general fund.

State Appropriations. NMCAC has received $16.8 million in general fund revenue since 2007 for the supercomputer, operations, exemplars, and gateways. During the 2009 legislative session, $2.8 million was withdrawn as part of the solvency plan and $3 million was included in the General Appropriation Act for ongoing operations. The table at **Appendix C** shows the appropriations received since 2007 and balances available for FY09.

The state's accounting records show $3 million available for FY09: $2.9 million for gateways and $91 thousand for ongoing operations. There were two draws totalling $596 thousand in FY09, one in September 2008 and the other in November 2008. The funds were transferred to UNM for NMCAC operational expenses. The balance available at UNM is $150.6 thousand. Total available for FY09 operations as of the end of April 2009 is $241.6 thousand.

Non-State Revenue. A document titled *Specific Benefits to NM from the NMCAC* dated January 10, 2009, and authored by the governor's science advisor indicates that the goal for NMCAC is to be self-sustaining by FY14, seven years after initial state funding, not five as initially represented. Other documents provided by the governor's science advisor indicate that $115.5 million will be required over a seven-year period for recurring and nonrecurring costs. Eighty-two percent of the revenue for ongoing operations was estimated to come from non-state sources.

The *Specific Benefits to NM from NMCAC* shows revenue to the state for FY09 at $3 million; however, almost $2 million is actually in-kind contributions. Non-state revenue sources for FY10 are projected to be $31.3 million. There is no documentation to support the $2.1 million estimation of in-kind contributions from the national laboratories, research universities, and private companies for FY07 through FY09. NMCAC has a no-cost lease until January 2010 for the Mesa del Sol property it currently occupies valued at $126 thousand. The table below summarizes the projected revenue from a film company, in-kind contributions, scholarships, and direct support for FY09 and FY10. The total in-kind contributions do not include a $25 thousand donation from a biotech company because no evidence of the contribution was available.

Table 4. Projected Revenue and In-Kind Contributions
(in thousands)

	FY09		FY10	
Source	**Revenue – Generating Contracts**	**In-Kind Contributions**	**Revenue – Generating Contracts**	**In-Kind Contributions**
Film Company	$1,100.0		$2,000.0	
Intel Space		$1,200.0		
Member Organizations [1]		$457.0		
Scholarships		$90.0		
National Science Foundation				$1,000.0
Other [2]		$189.0	$28,250.0	$47.0
Total	**$1,100.0**	**$1,936.0**	**$30,250.0**	**$1,047.0**

Source: Governor's Science Advisor

(1) UNM, NM Tech, NMSU, LANL, SNL, State of NM
(2) May include Mesa del Sol space

According to the governor's science advisor, in November 2008 there were 10 revenue-generating prospects for the supercomputer. Of the entities on the list, only two have committed to do business with NMCAC through a third-party contract. Of those two only one has generated any revenue, $300 thousand deposited into the NMCAC private account. By the end of March 2009, $1.2 million was expected to be deposited into an escrow account. However, NMCAC was not able to initiate the projects by the expected date because it did not have sufficient resources. The money was not deposited into the escrow account.

Free Use of the Supercomputer. The supercomputer is not currently generating any revenue. Six entities have been allowed to use the supercomputer at no cost since June 2008 when the supercomputer went into production. The three research universities, two national laboratories, and one nonprofit have run over 65 thousand jobs. NMCAC has not developed or adopted a rate structure to charge entities wishing to use the supercomputer. According to the chief operating officer, the three research universities, national laboratories and state government will each be allocated 10 percent of the total capacity to run their own jobs. The remaining 40 percent will be reserved for paying customers. An enterprise operation cannot be self-sufficient if 60 percent of available capacity is given away. Moreover, rates for customers using the remaining 40 percent will have to be high enough to cover the cost of carrying non-paying users. With projected revenues not materializing as anticipated, a minimal charge of $10 per job would have generated $650 thousand. According to SGI, on average, the nonpaying customers are using about 90 percent of total capacity.

Table 5. Number of Supercomputer Jobs Run June 2008 through April 2009

Entity	Total Jobs
Los Alamos	3,318
NCGR	810
NMSU	45,797
NM TECH	518
SGI	408
SNL	10,645
UNM	4,209
Grand Total	**65,705**

Source: NMCAC and SGI

If the responses from the three research universities are any indication of the amount they will pay to use the supercomputer, then the revenue generated from member institutions will be zero. The universities may use their 10 percent capacity as their match for federal grants. As for NM Tech, it "does not intend to pay for time at NMCAC, we intend to use the time available to us to bring business to New Mexico." According to NMSU and UNM, they do not have funds to pay for computing time.

Projected Expenditures. NMCAC does not have a clear grasp of its future expenditures or how much it will receive in non-state revenues. Without adequate information NMCAC cannot create a realistic short- and long-term financial model.

The supercomputer is hosted at Intel's Fab7 at no cost as part of the SGI-contracted partnership. The staff at NMCAC does not know when the no-cost arrangement will end or if the $1.2 million per year lease estimate can be used to accurately project its expenditures. NMCAC is tentatively planning on negotiating a separate contract with Intel for the space, possibly starting on July 1, 2009.

The services of the education director were supposed to be provided by NM Tech on a half-time basis at no cost. In March 2009, NMCAC signed a $131 thousand contract with NM Tech retroactive to July 1, 2008, for those services. Without written memoranda of understanding clearly delineating the services, valuation of the services, and duration of in-kind services, NMCAC cannot properly plan.

Actual Expenditures. As of April 17, 2009, DoIT and UNM have issued contracts to 12 vendors totaling $13.8 million for a variety of services. The table below provides a summary of those contracts.

Table 6. Contracts for NMCAC Operations and the Supercomputer
(in thousands)

Scope of Work	Amount
Supercomputer, gateways, LambdaRail connection, site selection	$11,000.0
Supercomputer maintenance and support	$2,206.8
Telecommunications-needs assessment, analysis and mapping and recommendations	$30.0
Chief operating officer	$134.0
Financial Management	$50.0
General liability insurance	$1.1
Chief operating manager	$18.0
Administrative assistant	$20.0
Website and email	$10.0
Education liaison	$50.0
Computer support	$25.0
Legal services	$148.0
Education director	$131.0
Total	**$13,824.5**

Source: LFC Analysis

The most notable of the contracts is the one to procure the supercomputer, which accounts for over 90 percent of the total contracts issued through DoIT and UNM and was discussed earlier. There are five other significant contracts. The contract with UNM for accounting services and the contract for the chief operations manager appear to be for similar services. The contract with NM Tech pays a full-time professor $131 thousand to be NMCAC part-time education director. The contract for the part-time chief operating officer was not amended before the "not to exceed" limit was surpassed by $30 thousand. The last contract of concern for legal services is discussed below.

Legal Services Procurement. The procurement of legal services was artificially divided into two separate procurements, one through DoIT and the Governor's Office and the other through UNM totaling $148 thousand. The governor's science advisor approved payments even though he was not an "authorized officer" who could make commitments on behalf of the state as defined by Authorized Officers – Delegation, 2.20.2.10 NMCA.

The Procurement Code defines the procurement of legal services up to $50 thousand as a small purchase and excludes them from a competitive sealed bid or an invitation to bid. On July 11, 2008, the Governor's Office and DoIT entered into a $40 thousand (plus gross receipts tax) contract for legal services for NMCAC to conclude the incorporation of NMCAC and agreements between the universities and state entities. However, the articles of incorporation and the bylaws for NMCAC were filed with the Public Regulation Commission on July 3, 2008, eight days before the effective date of the contract. In October 2008, the contract was amended adding "additional work" to the scope of the contract and increasing the amount by $10 thousand. The "additional work" for the supercomputer was not described. If indeed the attorney worked on NMCAC incorporation, then the work was done without a contract in violation of the Procurement Code.

NMCAC through UNM subsequently signed a contract on November 14, 2008, retroactive to October 1, 2008, with the same attorney for continued services: to develop agreements with research universities and other entities; provide assistance and legal services for the formation, maintenance, and continuation of operations; negotiate and prepare legal documents and contracts, litigation, and legal controversies in court or administrative agencies, speak before the Legislature, and serve as a member of NMCAC's executive leadership team. Because this contract was not issued by a state agency, the administrative rule Retroactive Approval of Contracts or Contract Amendments, 2.40.2.13 NMAC, which requires Department of Finance and Administration approval, does not apply. The total compensation for this attorney under both contracts is $148 thousand. According to the contract language, "This agreement is an extension of the PSA with the Governor's Office and DoIT and is justified as a sole source procurement." The Procurement Code states that a contract can be awarded without a competitive sealed bid or proposal if, after conducting a good-faith review of available sources and consulting the using agency, there is only one source for the required service. NMCAC states that "experience and skill sets necessary go beyond substantive and procedural requirements (and) they require knowing state procurement regulations and procedures." Contracting for legal services that started under another contract is not sufficient justification for a sole source contract or for not having competitively bid the work before signing any contract. Moreover, a contract with a state agency cannot be amended or extended by an educational institution or a nonprofit even if the funds to pay the contractor are from the same source (the

state of New Mexico). Expenditure information kept by UNM on the second contract shows that the contract has been overrun by almost $10 thousand. NMCAC amended the contract on March 23, 2009 by $34 thousand to cover the overrun and work done through the end of the fiscal year.

Other state agencies pay between $150 and $174 per hour for contracted legal services versus $250 per hour for this attorney. A survey of salaries paid to full-time attorneys in eight agencies shows that a full-time attorney would have cost the state about $20 thousand less than this contract attorney. A part-time term attorney position would have provided twice as many hours as the contract attorney and would have saved the state almost $90 thousand.

NMCAC was formed under the University Research Park and Economic Development Act. Section 21-28-7 (B) NMSA 1978 deems a research park corporation an agency or other political subdivision of the state for purposes of applying statutes and laws relating to the furnishing of goods and services to the university that operates it. (Goods and services are acquired through the Procurement Code.) Because one part of NMCAC operations are under DoIT's authority and another part operates as a New Mexico non-profit corporation assisted by UNM, it is difficult to determine where the state-agency-operated entity ends and the nonprofit begins. At present, NMCAC is operating under state agency and university rules, which include abiding by the Procurement Code.

Legal Services Invoices. Attorneys cannot bill clients for accounting services or other legal office overhead. Section 16-105 NMRA 1978 (The Rules of Professional Conduct) states, "a lawyer shall not make an agreement for, charge or collect an unreasonable fee or an unreasonable amount for expenses."

A review of the attorney's invoices found that

- Invoices are sufficiently vague to allow for payment yet not explain what exact services were provided.
- The attorney requested and was paid to review and summarize his own contract, negotiate a contract for his associate (cost for those services are already part of the contract), answer questions about his invoices, and prepare and submit monthly invoices.

Although there is no case law in New Mexico, the Maryland Court of Appeals in *Attorney Grievance Commission of Maryland v. Barbara Osborn Kreamer* upheld the lower court's decision that the practice of charging clients for accounting services was unreasonable and a violation of the Maryland Rules of Professional Conduct which states, "a lawyer shall not make an agreement for, charge, or collect an unreasonable fee or an unreasonable amount for expenses." The Maryland Rules of Professional Conduct are sufficiently similar to New Mexico's that the reasonable person would draw the same conclusion as did the Maryland courts. Additionally, the American Bar Association found that general office overhead should be subsumed within the lawyer's fee for professional services. In this instance it is reasonable to assume that $250 per hour includes general office overhead.

In addition to billing for legal office overhead, the attorney also billed and was paid for reviewing retreat materials and planning the retreat (July 3 – 8, 2008) before the effective date of his contract (July 11, 2008).

Technical and Operational Support. NMCAC has no full-time permanent staff. Since July 2008, it has operated with part-time contracted staff at a cost of $358.4 thousand. The bulk of the appropriation for operations goes to pay for the maintenance and support of the supercomputer ($2,086.9 thousand).

Innovative Digital Education and Learning Support. The *NMCAC Business Plan* proposes 44 distributed videoconferencing sites or gateways across the state at institutions of higher learning (state and private), national laboratories, and Intel. The total set aside for this effort is $2.5 million. The purpose of the gateways is to provide distance education and training and to promote the higher and public education innovative digital education and learning (IDEAL) initiative. The responses to the request for proposal (RFP) are due on May 26, 2009 for the equipment described below. If a vendor is selected and equipment is installed at the first 15 sites during FY10, the current operating budget has insufficient funding to support those sites. The General Appropriation Act of 2009 includes $3 million for staff and operational costs. If the maintenance and support of the supercomputer remains flat at FY09 levels, NMCAC will have $913 thousand to operate.

The gateway sites will be equipped with high-speed, high-definition videoconferencing, 3-D visualization capabilities. The desktop computers will have 3-D visualization screens. **Appendix D** is a diagram of the proposed setup at the various sites. According to the gateway request for proposal, the infrastructure and tools will be used for simulation, visualization, and collaboration to connect urban and rural New Mexico to improve and support distance education, economic development, and community development. **Appendix E** shows 39 of the 44 gateway sites and their installation priority. Among the 30 state-funded colleges and universities, there are also six private colleges. Although the initial proposal for gateway sites included LANL, SNL, Kirtland Air Force Base, and White Sands Missile Range, they are no longer on the list. The priority site for state government is shown as the State Capitol even though a better site would be DoIT's training center. The Plan also proposes that the state is the party responsible for maintenance, repairs, and upgrades of the equipment. However, no funding was requested or received for maintenance, repairs, and upgrades.

Some gateway sites may be impacted by inadequate bandwidth. DoIT is currently working with the state's telecommunication companies on a statewide broadband initiative that might be able to leverage stimulus funds from the American Recovery and Reinvestment Act.

NMCAC INCORPORATION AND NONPROFIT STATUS

Section 21-28-4 NMSA 1978 allows a university to form one or more research park corporations, separate and apart from the state and the university, to promote, develop, and administer research parks or technological innovations for scientific, educational and economic development opportunities in accordance with bylaws adopted by the research park corporation or economic development initiatives that support the teaching, research or service mission of the university. NMCAC was not organized by one university, but by the University Research Consortium (UNM, NMSU, and NM Tech). It is a standalone nonprofit entity not directly affiliated with any of New Mexico's research universities or state agencies. University research parks have traditionally been a mechanism for research universities to grow technology-based knowledge economies. According to *A Resource Guide for Technology-based Economic Development* prepared for the US Department of Commerce, research universities have been most effective in launching and supporting knowledge economies because they

- Are performing world-class research,
- Have nationally prominent faculty,
- View themselves as key partners with industry and government,
- Have the physical infrastructure to support research technology development, and
- Have the mechanisms, including financing, to facilitate transiting research into commercial products and processes.

Structure, Accountability and Outcomes. Although NMCAC's core mission of economic growth and educational opportunity expansion fits into the purpose of the University Research Park and Economic Development Act, its current structure is neither transparent nor fluid. The operations are split between a state agency (DoIT) and the nonprofit with a university in the middle serving as the flow-through funding mechanism. The structure requires varying accountability decided by the laws, rules and policies of each entity. As discussed earlier, three accounts are kept to operate NMCAC. One at DoIT for the maintenance and support of the supercomputer and for flow-through funding, one at UNM to receive the flow-through funds from DoIT to pay for NMCAC operational expenses, and one at NMCAC to use for promotional activities.

The Economic Development Department (EDD) through statute created a means by which a non-profit corporation can receive state appropriations. The New Mexico Development Corporation (NM Partnership) was created through the Economic Development Corporation Act and contracts with EDD to create jobs. NMCAC's corporation structure, unlike the NM Partnership's, does not allow state appropriations to flow directly to it. An intermediary, UNM, is required to accept the money and pay for expenses on its behalf. The NM Partnership can also generate revenue from other sources and retain them for operational needs. The *NMCAC Business Plan* calls for the Legislature to create a funding bill that provides for revenue generated to flow back to NMCAC and not the state general fund. Legislation was introduced for three consecutive years to create NMCAC. Finally, in 2009 the Legislature enacted the New Mexico Research Application Act, which is very similar to the University Research Park and Economic Development Act. The act may not address the issue they were attempting to resolve.

New Mexico Research Application Act. In its newsletter dated November 18, 2008, NMCAC reports that it "had requested (but did not get) legislation during the regular session that would have created the Center and provided a transparent means of providing state funding to the Center." During the 2009 legislative session, the Legislature passed and the governor signed Senate Bill 205 (Chapter 66) to establish a non-profit corporation to interact with business and government agencies, universities, private foundations, and national laboratories to foster economic development in the areas of technology and intellectual property. According to EDD, the non-profit corporation in the New Mexico Research Application Act is related to the NMCAC (supercomputer) initiative, Energy Innovation Fund, Water Innovation Fund, Technology Development, and Green Grid Initiative. If indeed this law was enacted to the establish NMCAC, then the nonprofit will have to dissolve and reincorporate under the new law. Although correspondence with the contracted chief operations officer indicates that they did not know about the new law or how it will affect them, the education coordinator and the attorney billed for monitoring the bill and the client services director submitted a fiscal impact report on the bill.

The discussion below describes NMCAC's incorporation, board of directors, and tax exempt status.

Articles of Incorporation and Bylaws. The articles of incorporation signed on June 27, 2008, were filed with the Public Regulation Commission Corporations Bureau on July 3, 2008. The articles were adopted to form a non-profit corporation for charitable, educational, and scientific purposes to facilitate and expand research cooperation among UNM, NMSU, and NM Tech; to promote statewide cooperation in attracting research resources; to manage resources for the benefit of the state's research facilities; to promote education and policy development in science, technology, and economic development; and to manage the universities' role in expanding awareness, access, and opportunities. The corporation shall be operated, supervised, or controlled through the universities' consortium, the single member of the corporation. On dissolution, assets will be disposed of consistent with (established) requirements. Remaining assets will be distributed to UNM, NMSU, and NM Tech. Corporate assets will be used to pay liabilities. Assets belonging to the state will be returned to the state and will not be used to settle any liabilities. The corporation's address is the address of the registered agent a contract employee. The board of directors is the same as those in the bylaws shown below.

The bylaws state that NMCAC is organized by the New Mexico University Research Consortium (university consortium) under the University Research Park and Economic Development Act exclusively for charitable, educational, and scientific purposes within Section 501(c)(3) of the Internal Revenue Code. The affairs, business, and property of the corporation are managed and controlled by the Board of Directors selected from individuals holding the positions of

- Governor's science advisor
- DoIT secretary
- EDD secretary
- HED secretary
- PED secretary
- Telehealth Commission director
- UNM research vice president

- NMSU research vice president
- NM Tech research vice president
- LANL research vice president
- Sandia research vice president
- Two representatives from rural education and rural economic development sectors
- Two representatives from the private sector.

Board of Directors. Section 53-8-18 NMSA 1978 requires a corporation to have at least three directors. NMCAC bylaws provide for 15 members to the board of directors. PRC corporation records show that the governor's science advisor, the Telehealth Commission director and the Economic Development Department (EDD) secretary are the directors of record. A review of the various documents provided by NMCAC staff and the governor's science advisor show variations in the board's makeup (**Appendix F**). Official documents showing the board of directors need to be aligned to reflect the same information. Additionally, the two members from the private sector represent Intel and Cerelink, which present at least a perception of a conflict of interest. Intel provides the site for the supercomputer, but the state pays the utilities, and Cerelink is the intermediary between NMCAC and private companies. Furthermore, 50 percent of the corporate officers no longer work for the state.

Internal Revenue Code Tax Exempt Status. A review of the Internal Revenue Service (IRS) website Publication 78, *Cumulative List of Organizations described in Section 170(c) of the Internal Revenue Code of 1986* does not include NMCAC even though the governor's science advisor said the NMCAC was a 501(c)(3). Conversations with NMCAC-contracted chief operating officer revealed that a certified public accounting firm was hired in late April 2009 to assist with the application process and that the application has been sent to IRS. An organization may qualify for federal tax-exempt status if it is organized and operated exclusively for religious, charitable, scientific, educational, literary, or public safety purposes. According to the Articles of Incorporation, NMCAC is organized for charitable, scientific, and educational purposes. IRS requires organizations seeking tax exempt status in operation less than one year to provide a proposed budget for two full accounting periods and a current statement of assets and liabilities. Because NMCAC is operating with three separate financial accounts, it is conceivable it will have to aggregate the three accounts to provide an accurate picture of its assets and liabilities.

Comparison of State Supercomputing Centers

Location	Funding Received or Required	Estimated Recurring Costs	Total State Appropriation	Size in Teraflops
New Mexico: New Mexico Computing Applications Center (NMCAC) -	$42.0	$16.6	$19.9	172
Alabama: Alabama Supercomputer Authority - Alabama Supercomputer Center	$8.0	$1.0	$6.2	1.1
California: San Diego Supercomputer Center	$170.0	$14.0	$4.5	37.2
Illinois: National Center for Supercomputing Applications (NCSA) - University of Illinois	$43.0	-	$27.0	9.8
Louisiana: Center for Computation & Technology - Louisiana State University	$40.0	$9.0	$7.5	3.7
Minnesota Supercomputer Center	UNK	$6.4	$70.0	8
Mississippi Center for Supercomputing Research	$28.0	$1.0	$28.0	1.4
New Mexico: Center for High Performance Computing at the University of New Mexico	$4.0	$3.1	$0.0	~100
New York: Center for Computational Research - University of Buffalo	$313.0	UNK	$120.0	7.7
North Carolina: Renaissance Computing Institute	$0.8	$22.0	$17.7	11
Ohio: Ohio Supercomputing Center	$20.0	$13.5	$11.1	10
Pennsylvania: Pittsburgh Supercomputer Center - University of Pittsburgh	$36.0	$9.0	$4.4	6
Texas: Texas Tech University - High Performance Computing Center	UNK	$2.0	$0.0	1.3
Texas: Texas Advanced Computing Center - University of Texas at Austin	UNK	$3.3	$0.0	55.5
Utah: Center for High Performance Computing - University of Utah	$2.0	$1.0	$0.0	2
Virginia: Virginia Tech Terascale Supercomputing Facility	$7.9	$0.7	$0.0	12.25

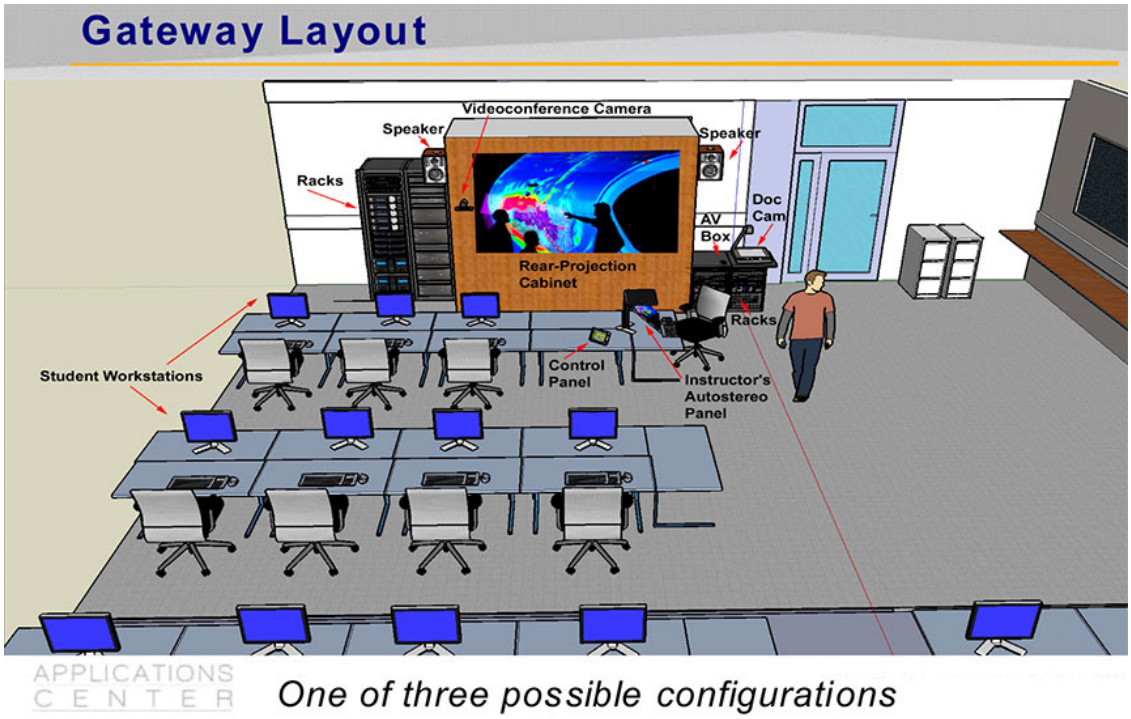
Source: LANL Chief Technologist

Top 20 World's Fastest Supercomputers

Rank	Site	System
1	DOE/NNSA/LANL United States	BladeCenter QS22/LS21 Cluster, PowerXCell 8i 3.2 Ghz / Opteron DC 1.8 GHz , Voltaire Infiniband IBM
2	Oak Ridge National Laboratory United States	Cray XT5 QC 2.3 GHz Cray Inc.
3	NASA/Ames Research Center/NAS United States	SGI Altix ICE 8200EX, Xeon QC 3.0/2.66 GHz SGI
4	DOE/NNSA/LLNL United States	eServer Blue Gene Solution IBM
5	Argonne National Laboratory United States	Blue Gene/P Solution IBM
6	Texas Advanced Computing Center/Univ. of Texas United States	SunBlade x6420, Opteron QC 2.3 Ghz, Infiniband Sun Microsystems
7	NERSC/LBNL United States	Cray XT4 QuadCore 2.3 GHz Cray Inc.
8	Oak Ridge National Laboratory United States	Cray XT4 QuadCore 2.1 GHz Cray Inc.
9	NNSA/Sandia National Laboratories United States	Sandia/ Cray Red Storm, XT3/4, 2.4/2.2 GHz dual/quad core Cray Inc.
10	Shanghai Supercomputer Center China	Dawning 5000A, QC Opteron 1.9 Ghz, Infiniband, Windows HPC 2008 Dawning
11	Forschungszentrum Juelich (FZJ) Germany	Blue Gene/P Solution IBM
12	New Mexico Computing Applications Center (NMCAC) United States	SGI Altix ICE 8200, Xeon quad core 3.0 GHz SGI
13	Computational Research Laboratories, TATA SONS India	Cluster Platform 3000 BL460c, Xeon 53xx 3GHz, Infiniband Hewlett-Packard
14	Grand Equipement National de Calcul Intensif - Centre Informatique National de l'Enseignement Suprerieur (GENCI-CINES) France	SGI Altix ICE 8200EX, Xeon quad core 3.0 GHz SGI
15	National Institute for Computational Sciences/University of Tennessee United States	Cray XT4 QuadCore 2.3 GHz Cray Inc.
16	IDRIS France	Blue Gene/P Solution IBM
17	Total Exploration Production France	SGI Altix ICE 8200EX, Xeon quad core 3.0 GHz SGI
18	Government Agency Sweden	Cluster Platform 3000 BL460c, Xeon 53xx 2.66GHz, Infiniband Hewlett-Packard
19	Computer Network Information Center, Chinese Academy of Science China	DeepComp 7000, HS21/x3950 Cluster, Xeon QC HT 3 GHz/2.93 GHz, Infiniband Lenovo
20	Pacific Northwest National Laboratory United States	Cluster Platform 4000 DL185G5, Opteron QC 2.2 GHz, Infiniband DDR Hewlett-Packard

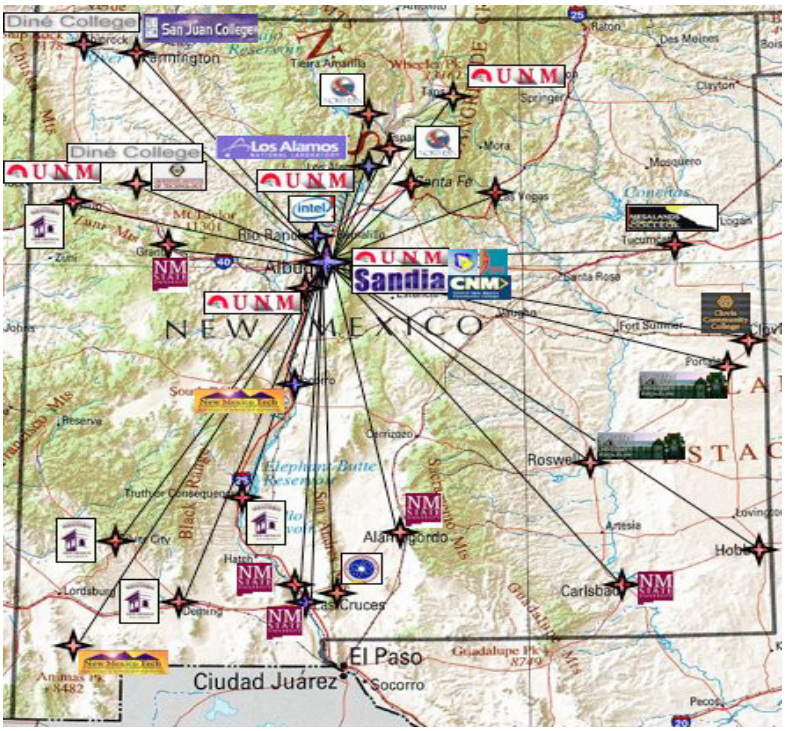
Source: www.top500.org

Proposed Gateway Room Configuration



Source: www.newmexicosupercomputer.com

Gateways Site Map



Source: NMCAC Business Plan

Gateway Sites and Installation Priority

Entity	Site	Type	Installation Priority
New Mexico Computing Applications Center	Albuquerque	Nonprofit	1A
University of New Mexico	Albuquerque	State University	1B
New Mexico State University	Las Cruces	State University	1C
New Mexico Institute of Mining and Technology	Socorro	State University	1D
State Capitol Building	Santa Fe	State Government	1E
New Mexico Highlands University	Las Vegas	State University	1F
Easter New Mexico University	Portales	State University	1G
Western New Mexico University	Silver City	State University	1H
New Mexico Military Institute	Roswell	State University	1I
San Juan College	Farmington	State University	1J
Navajo Technical College	Crownpoint	Private College	1K
Northern New Mexico College	Espanola	State University	1L
Central New Mexico Community College	Albuquerque	State University	1M
New Mexico Junior College	Hobbs	State University	1N
Santa Fe Community College	Santa Fe	State University	1O
Clovis Community College	Clovis	State University	2
College of Santa Fe	Santa Fe	Private College	2
Dine College	Shiprock	Private College	2
Dine College	Crownpoint	Private College	2
Eastern New Mexico University Branch	Roswell	State University	2
Eastern New Mexico University Branch	Ruidoso	State University	2
Institute of American Indian Arts	Santa Fe	Private College	2
Luna Community College	Las Vegas	State University	2
Mesalands Community College	Tucumcari	State University	2
New Mexico Highlands University Branch	Rio Rancho	State University	2
New Mexico State University Branch	Grants	State University	2
New Mexico State University Branch	Dona Ana	State University	2
New Mexico State University Branch	Alamogordo	State University	2
New Mexico State University Branch	Carlsbad	State University	2
NMCAC Office Facility	Albuquerque	Nonprofit	2
Northern New Mexico Community College	El Rito	State University	2
Southwestern Indian Polytechnic Institute	Albuquerque	Private College	2
University of New Mexico Branch	Gallup	State University	2
University of New Mexico Branch	Los Lunas	State University	2
University of New Mexico Branch	Los Alamos	State University	2
University of New Mexico Branch	Taos	State University	2
Western New Mexico University Branch	Truth or Consequences	State University	2
Western New Mexico University Branch	Deming	State University	2
Western New Mexico University Branch	Gallup	State University	2

Source: Gateway RFP 92-22

General Fund Appropriations for the Supercomputer

(in thousands)

Bill Number	Purpose	Amount	Balance Available
SB827	To plan, design, construct, renovate, improve, purchase and equip a state center for advanced computing	$14,000.0	$2,900.0
SB471 Section 20	To purchase a computing system [1]	$1,800.0	$0.0
SB471 Section 56	To purchase a computing system contingent on the state receiving an award from the national science foundation to develop supercomputing systems [1]	$1,000.0	$0.0
2008 GAA	For staffing and operation expenses for the New Mexico computing applications center	$2,555.0	$41.0
SB165	For expenditure in fiscal year 2009 for the computing applications center	$300.0	$50.0
HB9 2009	Reduce prior appropriations SB471 [1]	($1,800.0)	
HB9 2009	Reduce prior appropriations SB471 [1]	($1,000.0)	
2009 GAA	For staff and operational expenses (for FY10)	$3,000.0	
		$19,855.0	$2,991.0

Source: LFC Analysis

(1) Appropriations made in prior year reduced as part of solvency package.

APPENDIX F

NMCAC Board Members Identified in Various Documents

NMCAC List	Articles	Bylaws	PRC Records	New Mexico Applications Act (12 members)
Tom Bowles, LANL (Gov Office)	At least three	Governor Science Advisor	Governor Science Advisor	EDD Secretary
Marlin Mackey, DoIT	Julia Fulghum, UNM	DoIT Secretary	EDD Secretary	HED Secretary
Fred Mondragon, EDD	Vamil Chaitnay, NMSU	EDD Secretary	Telehealth Commission Director	WSD Secretary
Reed Dasenbrock, HED	Van Romero, NM Tech	HED Secretary		NM Council of University Presidents Chair
Veronica Garcia, PED	Tom Bowles, LANL (Gov Office)	PED Secretary		Gov. Science Advisor
Bob Mayer, DOH	Roy Soto, DoIT	Telehealth Commission Director		National Lab Member
Vimal Chaitanya, NMSU	Reed Dasenbrock, HED	UNM VP Research		Business Community
Van Romero, NM Tech	Fred Mondragon, EDD	NMSU, VP Research		Local Government
Julia Fulghum, UNM	Jami Grindatto, Intel	NM Tech, VP Research		Post-secondary Public Educational Institution
Terry Wallace, LANL	Terry Wallace, LANL	LANL, VP Research		Rural Economic Development
Rick Stulen, SNL	Rich Stulen, SNL	SNL, VP Research		Venture Capital expert
Stephen Gamble, ENMU		Rural Education		Health Care expert
Tad Powers, Hidalgo Econ		Rural Economic Dev		
Jami Grindatto, Intel		Two from Private Sector		
Bill Garcia, Cerelink				

Source: LFC Analysis