

MINUTES
LOUISIANA OPTICAL NETWORK INITIATIVE
MANAGEMENT COUNCIL

July 9, 2013

The Louisiana Optical Network Initiative (LONI) Management Council (MC) met at 1:00 p.m., Tuesday, July 9, 2013, in the 6th Floor Board Conference Room, Claiborne Building, Baton Rouge, LA. Dr. Joel Tohline, Chair of the LONI Management Council, called the meeting to order. A roll call was taken and a quorum was established.

Council Members Present:

Mike Asoodeh
Beth Courtney
Gene Fields
Richard Howze
Charlie McMahan
Brian Nichols
Bettina Owens
Ramu Ramachandran
Uma Subramanian for Jim Purcell
Michael Stubblefield
Joel Tohline
Donnie Vandal
Rachel Vincent-Finley

Council Members Absent:

Laura Levy
Thomas Lovince
Eric Setz

Guests:

Lonnie Leger, LSU
Leo Tran, Tulane
Honggao, LSU
Sam White, LSU
Randy Ward, LETA
Jan Waguespack, AT&T
Angela Mastainich, BoR
Barbara Goodson, BoR
Lance Neal, BoR
Kathy Thomas, Dell
Lorne Rodrigue, Dell
Patrick Cavell, CISCO
Carl Brandt, enfoPoint

Chair Joel Tohline began by welcoming everyone to the meeting. Mr. McMahon asked that Mr. Driesse's position as State CIO be replaced on the Council. Mr. Richard Howze stood up in the audience and stated he was in attendance as interim for that position. He was invited to come to the table to participate in the meeting. Chair Tohline then recognized Dr. Ramu Ramachandran of Louisiana Tech as the replacement for Dr. Les Guice, and stated that he would be a member of the Council representing the UL System. Chair Tohline then asked the audience to introduce themselves.

APPROVAL OF JANUARY 8, 2013 MINUTES

On a motion from Dr. Michael Stubblefield, seconded by Mr. Donnie Vandal, the LONI Management Council voted unanimously to approve the minutes of the January 8, 2013 LONI Management Council meeting.

INTERNET 2 UPDATE

Mr. Vandal stated that in the folders behind the minutes was a letter that was sent out in April announcing the new Internet2 policy and business model and the charges for Internet2 service that will be going into effect beginning in 2014. He indicated that the new charges overall appear as though they will be very beneficial to LONI. The key changes to the fee structure that will affect LONI is the connector fee for Advanced Layer 2/Advanced Layer 3 services, which currently is \$480,000 per year for 10 gig capacity. Effective July 1, 2014 the fee for a 100 gig capacity will be \$200,000. We will see a small increase in the Sponsored Educational Group Participant (SEGP) base fee which allows for the community and technical colleges and K – 12 schools to access Internet2. There will also be a fee increase for individual Level 1 University members. Mr. Vandal indicated that it is clear that Internet2 is trying to encourage adoption of 100G capacity across the nation. Mr. McMahon asked if there is a schedule or commitment as to when we would have the 100G port available for this level of

service with Internet 2. Mr. Leger responded that Internet2 representatives have said it would be in the September/October timeframe.

Mr. Vandal also discussed a formal agreement that has recently been entered into by the Board of Regents on behalf of LONI and the relatively new Mississippi network, MissiON, to establish a direct peering relationship and connection between the two networks. Mr. Vandal indicated this relationship will provide possible redundancy for the two networks and offer the future opportunity to share in greater service, such as an additional 100G connection to Internet2, with MissiON while sharing the cost of such service. It would give us a gradual way to increase our Internet2 capacity and not incur the full cost.

CHIEF ADVISOR REPORTS/RECOMMENDATIONS

Dr. Tohline recognized Mr. Lonnie Leger to present the technical report. Mr. Leger stated that several projects have been implemented or are very close to completion since the last meeting. The fiber construction at Xavier has been completed and the fiber construction to Nicholls State University is nearing completion and should be available near the end of summer.

Mr. Leger then addressed the initiative that has been designated LONI 2.0, essentially an upgrade of a major portion of the network in order to support 100G capability on the network backbone. Planning has been underway for the past couple of years focused on what that upgrade will require, what will it look like, what is the best technology, what is the cost involved in such an upgrade. These requirements relate to both the optical infrastructure and the router infrastructure. Investigation has been underway on the current and emerging market offerings and conditions for these components. Internet2, as well as many of our network counterparts across the nation, have been involved in these types of upgrades and we have been observing their choices and decisions on these issues. We are now getting to the point of making some final determinations and narrowing our focus to a limited number of preferred vendor choices. We are continuing in the mode of gathering information and details from presentations and meetings

along with various stakeholders, including CIOs and Network Administrators across the state. This is a large and fairly expensive initiative, but we have had excellent opportunities to leverage the use of some available grant funds to assist in the wide-spread deployment plans for this upgrade. Specifically, we will realize benefits from the Xavier project in support of the 100G upgrade which will allow Xavier to become part of the science DMZ portion of the upgraded network between LSU and the LSU Health Sciences Center in New Orleans. The science DMZ is also benefitting from the CC-NIE grant awarded to LSU for enhancement of the research capacity of the network. These enhancements, as well as the 100G connectivity to Internet2, will significantly improve our technology/network.

Mr. McMahon inquired as to the bandwidth that will be available through TR/CPS once Internet2 completes its 100G connectivity to LONI. Mr. Leger responded that at no additional cost LONI will begin to have 20G of capacity. Mr. McMahon then asked for the status of commodity internet currently available and utilized overall throughout the LONI network. Mr. Leger responded that currently we have available 1G in Jackson, 1G in Shreveport, 1G in New Orleans, and 4G in Baton Rouge. The network in total is consuming, on an average daily 24/7 basis, approximately 5G of internet capacity. He further indicated that there is peak usage at different times of the day, and that depends on the various types of users on the network. For instance, students use late in the evening, late in the morning, and on weekends. Then, there is typical high usage 8:00 a.m. – 5:00 p.m., Monday – Friday, for business hour operations. Mr. McMahon inquired as to how the Internet2 internet capacity counted in the capacity and usage numbers just provided, and Mr. Leger responded that it was accounted for within those numbers.

Mr. Leger then addressed the deployment of the numerous WAN reconfigurations and upgrades underway across the state. Those in the Lafayette, Baton Rouge, and New Orleans areas have been completed, while the Monroe area will be started Friday, the following week is Alexandria, the next week will be Shreveport, and the week after that will be Lake Charles. Dr.

Tohline asked for comments on the Wide Area Network reconfiguration and management proposal included in the Council's materials. Mr. Vandal responded that Mr. Leger could discuss the technical part and he would discuss the other aspects of the proposal. Mr. Leger stated that the campuses that connect via the wide area networks are those campuses that are not directly on our fiber backbone. We've had long and good standing relationship with them in supporting them since the early days of 2007, and this latest effort was the result of seeking ways to assist them better and lower their costs. With their input, LONI staff went back to the provider community that have contracts through OTM to determine a solution that achieves the desired end results of greater capacity, with appropriate connectivity, while hopefully costing less. After solicitation of proposals and evaluations, it was determined that AT&T, the predominant current provider, should be selected. AT&T has done an excellent job of project management for the conversions that have been underway over the past few months. The result will be cost savings that we will pass along to the campuses. At the same time, they were asking us to provide more assistance to them and for us to be more integrated with their operations and with their IT operations. The proposal before you discusses the WAN issue and the process used, as well as our efforts to be more engaging with them. In exchange we have proposed that there be some participation financially on their part. Mr. Vandal directed the members to the one-page (front and back) document that summarizes basically what Mr. Leger has just described. He stated that he considers it a win-win situation for LONI and the campuses. One of the concerns is the very expensive circuits that several of the campuses, particularly the LTC campuses that are located distant from the LONI network backbone, must pay for their connection. The proposed solution will reduce these costs for the campuses substantially while providing the LONI network staff an improve capability to monitor the network operations. He directed members to the highlighted part of the table in the proposal document. He explained that the connection costs incurred through OTM by LONI are passed on directly to the campuses.

These reconfigurations will reduce those costs and give provide them better capacity connections to the network. The proposal includes a modest charge to the campuses by LONI for network management expenses and to acquire some equipment for each of the circuit connections that will be managed on their behalf. This proposal has been discussed with Regents' staff and the next step will be, upon recommendation by the Council, presentation to Commissioner Purcell for his consideration. Mr. Vandal was questioned about the cost for the extra support. He responded that he felt that the cost would be modest, consisting of expenses of buying some equipment on behalf of the campuses. Those acquisitions would be phased in over time. Mr. Vandal also stated that there will be consideration given to adding an additional staff person for this effort as well as overall staffing demand. There is an authorized position which was to be filled about a year and half ago, but when budget issues surfaced that was put on hold. There are the dollars remaining for that position, as well as the monies to be generated by this proposal. Mr. Stubblefield questioned how \$25 per month would support an additional position. Mr. Vandal responded that the \$25 per month charge (times eventually 120 connections), in combination with other dollars for staff salaries would be adequate to provide for the position. After some continued discussion and questions regarding the proposal, the costs and the requirements to manage the new network configuration, Dr. Tohline summarized the concerns being raised. He indicated that LONI is a running very good operation on a very small staff, but that the additional burden of this new responsibility should be recognized and we should carefully assess the staffing, level of support and any other implications of engaging in this new service. Mr. McMahon said that he wants to make sure that as we expand our obligations and responsibilities that we don't do it at the expense of the support of the research activities that were the original purpose of putting this whole operation together. Mr. Fields added that one of the advantages of tools as described by staff that will be employed in providing this service is that it allows LONI to become more flexible and better able to manage the total resources of

LONI as it continues to grow and spread out, and as the needs of the customers change. Dr. Tohline indicated that since this proposal involves a fee structure he would like the Council to make a recommendation to the Commissioner of Higher Education that he give all consideration to implementing this management proposal. Mr. Stubblefield emphasized that he wants to make sure that the proposal is completely clear that this is a three year participation commitment and there will be some further clarification and elaboration of exactly what services will and will not be provided.

On a motion from Mr. Vandal, seconded by Dr. Michael Stubblefield, the LONI Management Council voted unanimously to approve the WAN Reconfiguration and Management Proposal and to recommend it to Dr. Purcell for his consideration.

Mr. Vandal asked Mr. Leger to elaborate upon the status of the High Definition Video project. Mr. Leger stated that bids were received on July 1st. Dr. Tohline reminded everyone that this project actually was initiated by the NSF EPSCoR \$20 million Louisiana Alliance for Simulation-Guided Materials Applications (LA-SiGMA) project that is now in the 3rd year of the grant. The HD Video capability was included in the LA-SiGMA project proposal because the project is very heavily invested in collaboration and virtual laboratories. Part of the proposal and part of the modest part of the funding from NSF was to provide really high quality video over the internet to allow collaborative work on the major campuses. Mr. Vandal explained that the HD Video effort was expanded beyond the original objectives since the Board of Regents is putting up approximately half the cost of a larger project. The HD Video capability will now include automatic recording and archiving so when seminars are given they will be stored and available for future use. Mr. Leger indicated that now that bids are in a selection will be made soon and equipment orders and delivery will follow quickly thereafter. He further indicated that he hoped by the end of the summer to be in the final stages of deployment. Dr. Ramachandran stated that

this is coming at a good time as the LA-SiGMA project investigators are going up to NSF in September to report on the status of the LA-SIGMA project.

Chair Tohline then moved to the Scientific Report. He said he wanted to address two items that the Council should be aware of, one being the annual request from the Coastal Emergency Risks Assessment (CERA) team for the 2013 hurricane season and the second being an item discussed several times previously, the need for acquisition of new high performance computing resources. He reminded the Council that there has been discussion at a number of meetings and over the past couple of years, to the effect that a major element of the overall LONI project from day one was the acquisition of high performance computing hardware to support the computational tasks of all the research campuses. The flagship machine on LONI for high performance computing is Queen Bee located in the State ISB Building nearby. Queen Bee is now a little over six years old and is effectively nearing the end of its life. Dr. Tohline reminded the Council that the LONI project was originally funded with a recurring funding commitment from the Blanco Administration, and that allowed the borrowing of funds up-front to put the network and some high performance computing in place quickly. The borrowing has been gradually paid off over the intervening years. This new fiscal year budget has funding for the last payment of that original debt, so Regents staff and Mr. Vandal have been working very closely to examine the possibility of a new line of credit to borrow funds to replace Queen Bee. He reported that the Division of Administration has given preliminary approval for Regents to secure a line of credit for acquisition of new high performance hardware. Staff is continuing to determine exactly how large an investment can be made, but they are very optimistic there will be an opportunity to replace Queen Bee with a system that could potentially be large enough to put the new machine in the top 30 or 50 in the top 500 list of supercomputer rankings. The supercomputer staff headed up by Mr. Sam White at LSU has been engaged in some planning for the type of architecture and requirements that would be needed with certain targeted levels of

outlay. Dr. Tohline then added that he would like some oversight from the Council in some form. So that the entire Council would not need to be involved, he would like to form a small group of members to provide oversight of the project. He indicated that he did not expect this to be a heavy time commitment or workload burden, but the group just be available for oversight and to bounce ideas off of as the system configuration is designed. He then asked Charlie McMahon, Rachel Vincent-Finley and Ramu Ramachandran to participate in this oversight group, and all agreed. He then asked for any questions or concerns about this project and approach. Ms. Courtney then asked about the State financing mechanism and whether there were any possibilities for financial assistance from other entities such as the Coastal Protection and Restoration Authority, which might have some funds that could be used. Mr. Vandal responded that the staff has been checking other possible funding sources and had so far received mixed responses. He indicated they would continue in those efforts. Dr. Tohline reminded the members that we've been successful many times leveraging state dollars to secure federal funds, and the investment in Queen Bee is a prime example. State funding was used to purchase Queen Bee, but that investment has lead to lots of other subsequent funding coming into many of the universities across the state from grants which simply would not have happened had this resource not been there. So it's a kind of matching in a way and although it's not something you are guaranteed, experience has shown that the investment in the research tool certainly has been leveraged very well. Dr. Tohline then referred to a proposal that LSU submitted to the National Science Foundation about six months ago for a major research instrumentation, or MRI competition. He indicated that reviews of that proposal were very good and award of a grant appears very promising. The request was for NSF to provide \$4 million to buy a new HPC System for LSU. That's another case where there is no way that a proposal by LSU would have reviewed that well had we not already demonstrated, as a LONI community, that we know how to run systems that are large like this. Dr. Tohline concluded by stating that things seem to be

coming together very well, and he wanted to acknowledge the strong support of Board of Regents staff in these efforts.

Dr. Ramachandran inquired about the satellite machines, the six Dell Linux System machines distributed across the state and whether those would be phased out just as the distributed IBM machines were? Dr. Tohline and Mr. Vandal suggested that is something the Council needs to think about long term, and determine whether there is value in having that distributive type of capability with different architecture of different machines located physically at the campuses. They suggested the Council should take a long term perspective and ask “what does our community want, should we just decide we are going with the mainframe and stay that way and focus on that, just mount our resources in that one area or not?” Dr. Ramachandran stated that the one issue he sees with the distributed model from the perspective of a computational chemist/material scientist, is that there are software packages with weird licensing, requirements or licensing paradigms, So, if LONI is going to centralize, then the new machine will have to purchase what are referred to as supercomputer center licenses which can be opened up to any end user and which will be a little more expensive. Dr. Tohline stated that whether a single system at ISB or multiple systems should be pursued is a decision that is yet to be made and the group that was just formed should be considering that kind of question.

Dr. Tohline further stated another thing that this brings up is the data storage side of the whole question, which has not yet been tackled successfully. There are issues of whether to provide a distributed storage solution, since it might make sense for disaster management for instance. We might want to get large amounts of storage accompanying the primary supercomputer installation, but then be able to migrate that data to your local research campus at night. That’s another reason you might want a lot of storage at numerous campuses. Mr. McMahon suggested that Dr. Ramachandran might talk to Dr. Les Guice, whose insight we value on EPSCoR matters, about this issue and see if he thinks that this issue might be something

that could be addressed by a large EPSCoR effort. Dr. Tohline asked if there were any further comments or questions on the HPC issue, and hearing none he directed the attention of the Council to the request for support for the hurricane season and possible need for storm surge modeling.

This is a matter that has been done routinely each year for the hurricane season. In the event a hurricane is approaching the gulf coast, it has been past standard practice endorsed by this Council that the LONI HPC capabilities will be made available to the scientists and others who conduct modeling and simulations of the storm. He referred to a document and outline in the members material that provides procedures which have been patterned after previous years' experience. The proposal before the Council is to give the Executive Director and the Director of High Performance Computing permission to control access to the machines and make them available to the fullest extent necessary for emergency use and response. The Council's endorsement of this procedure is being requested. Dr. Tohline asked for any comments or questions. Ms. Countney asked if we have ever had actually to do this. Dr. Tohline responded that it has been done and the machines have been used essentially every hurricane season to some extent. When Gustav approached, for example, there were many, many models that were done on Queen Bee. Mr. McMahon commented that he thinks in every case we've been able to do a soft landing, in other words, we see the storms coming and we can ramp up slowly, giving the researchers enough time to clear processors. Sam White and his staff start reserving processors as events begin to materialize. Mr. Vandal stated that Dr. Robert Twilley, head of LSU's emergency response team, has formalized the process and structure a bit more this year and we have before us today a more elaborate document than we've had in the past. He approached Mr. Vandal earlier in order to develop this whole structure and Mr. Vandal had informed him that every year the LONI Management Council has unanimously supported it every year. Dr. Tohline took Mr. Vandal's statement as a motion.

On a motion from Mr. Vandal, seconded by Charlie McMahon, the LONI Management Council voted unanimously to approve the Louisiana Coastal Emergency Risks Assessment procedure.

EXECUTIVE DIRECTOR REPORT

Mr. Vandal reported that he has received an additional request from the Office of Coastal Protection and Restoration Authority for an additional allocation of computer cycles for their Master Plan work for coastal protection and restoration. This work will focus in the southwest coastal area. Mr. Vandal asked Mr. Sam White if there were any technical problems or if he felt comfortable with this additional allocation as it has been requested. Mr. White responded that they made a request that it be done on Super Mike 2, which is the new LSU machine, but that we would provide them cycles from wherever there is capacity that is available. Mr. Vandal stated that, given our long-standing relationship with them and the nature of the work that we should try to accommodate them as this is very important work for the state and this is another demonstration of the value of LONI. Ms. Courtney asked whether there were any charges for this service. Mr. Vandal responded no but that we have in one instance of a request established an arrangement that if the need for cycles exceeded a certain threshold there would be a charge. He could not recall the specific details of that particular arrangement at the moment. Mr. Stubblefield quoted a statement from the request that “It seems desirable to keep such important work with our State (i.e., by using LONI)”. Ms. Courtney stated that if we are going to do this, we should do a story about it to bring awareness and signal the value of it. Further, she stated, that if the work exceeds a certain amount we should ask them to pay. She added although we have donated computational time for hurricane modeling, she doesn’t know if LONI has ever been credited with this assistance. Dr. Tohline then asked for specific numbers that are being requested and indicated that those should be discussed further with Sam White. He stated that we will follow up with exactly what seems appropriate.

On a motion from Mr. Asoodeh, seconded by Mr. McMahon, the LONI Management Council voted unanimously to approve the request from the Office of Coastal Protection and Restoration Authority for additional compute cycles, pending an assessment by staff of the appropriate level of support.

Mr. Vandal stated that he has been in consultation with Board of Regents' staff about funding and it appears that the LONI funding for the new fiscal year will be stable. He is working with staff to put all things in place formally.

He reported that there have been recent discussions with Venyu, a data center operation located here in Baton Rouge and at the Cyber Innovation Center in Bossier Parish, about capabilities that they can offer our campuses. They have had discussions with several campuses regarding this type of need and LSU in particular wants access to their services. One hurdle has been that we do not have a direct fiber connection into the Cyber Innovation Center, but there have been discussions with Venyu, as well as several campuses, about the possibility of installing fiber. The LONI network runs along I-20, which passes right next to the Cyber Innovation Center, so it would not be a huge fiber install. We believe there is tremendous value to the community by LONI gaining access to the Cyber Innovation Center and the center has been very anxious for LONI to get a connection in. He indicated that they haven't reached any final decision points as yet, but the situation looks very promising.

He then referred to the completion of the Xavier fiber project and reported that there was a recent ribbon cutting held on campus to acknowledge their new connection to LONI. An attending priest blessed the fiber, Dr. Norman Francis, President of Xavier, made some very complimentary remarks, and the Governing Board's meeting was there that day so they were all in attendance as well. Mr. Vandal stated that it was a very nice event.

OLD BUSINESS/NEW BUSINESS

The last item to be addressed was the revision of the Council's Bylaws to address the need for Xavier and any other future private institution joining the network to have some

representation on the Council. He referred the members to their folders again which includes a proposal to add an additional member to the Management Council from a non-public institution that is a member of LAICU, other than Tulane, and to be selected by the President of the Louisiana Association of Independent Colleges and Universities (LAICU) organization. He indicated that Dr. Purcell and his staff had been consulted on this matter and that the commissioner is comfortable with the proposed revision and it is recommended that this action be taken today. Dr. Tohline asked for any other comments or questions. Mr. McMahon stated that to be clear on this matter, this will be a recommendation by the Council to the Regents since they are the ones that sign off on the Bylaws.

On a motion from Mr. Asoodeh, seconded by Ms. Owens, the LONI Management Council voted unanimously to recommend to the Commissioner of Higher Education the Bylaws revision as proposed.

PUBLIC EVENTS IN SUPPORT OF LONI

Although there were no public event activities to report, Mr. Vandal did propose that the Council consider having a session dedicated to engaging in some strategic planning in the near future. He reminded the group that there are new members on the council, that there are some major changes happening in the network, we are embarking on some major changes to the high performance computing environment, and he believes such a session would be of value. He suggested that this could be done in conjunction with the next meeting scheduled for October. He informed the Council that there had been one in 2008, and the participation was actually larger than the council with some members from the research community involved. Mr. McMahon commented that October is a rather heavy conference month for IT personnel, but Dr. Tohline stated that he was seeing general agreement by the Council members on the idea. He added that this would be a good way to share information. Dr. Ramachandran agreed and stated he attended the last one in 2008 and felt it was very good.

Ms. Barbara Goodson, Deputy Commissioner with the Board of Regents, stated that she and Mr. Vandal have discussed bringing the LONI Network, as an asset, to the Board more often, possibly quarterly, to educate the board members about the value of the asset. She added that she wants to educate her board members about what Louisiana has in LONI, and how it can help institutions recruit new faculty, new researchers, and attract new federal grant dollars. Ms. Owens asked about putting information on the website to help educate people about LONI and the resources available. Mr. Vandal stated that currently we are transitioning to a new website and we will be working on those enhancements. Mr. Leger stated that the new design is live and it is much better than before and much easier for us to manage it, change it, etc. Dr. Owens stated that a lot of faculty that are new and it is important to keep them up to date on what's available.

Ms. Courtney then asked Mr. Randy Ward of her staff to explain what LPB is working on with State Archives regarding assets of recorded state history over the past years. Mr. Ward informed the Council that LPB has joined with Louisiana State Archives to establish the Louisiana Digital Media Archive (LDMA), which is the home of the Louisiana Public Broadcasting Digital Collection and the Louisiana State Archive Multimedia Collection. This ever-expanding site contains a combined catalogue of more than 40,000 hours of media recorded over a half-century, consisting of film, video, audio, images and searchable transcripts, all of which will soon be available for individual and classroom learning. Ms. Courtney further stated that they have been cataloguing it appropriately with the common core standards that have been developed. She thinks they are farther along and more advanced than anywhere in the country. She indicated that she would like to do a demonstration, maybe at the retreat or whenever the council is talking about things, and that it could be helpful.

Dr. Tohline then asked for any other business and with none he thanked everyone for their active participation.

ADJOURNMENT

There being no further business to come before LONI Management Council, the meeting was adjourned at 2:34 p.m.