

**MINUTES
LOUISIANA OPTICAL NETWORK INITIATIVE
MANAGEMENT COUNCIL**

January 12, 2016

The Louisiana Optical Network Initiative (LONI) Management Council (MC) met at 1:10 p.m., Tuesday, January 12, 2016, in the Board Conference Room, 6st Floor, Claiborne Building, Baton Rouge, LA. Dr. Michael Stubblefield asked for a roll call. A roll call was taken and a quorum was established. Dr. Stubblefield welcomed everyone.

Council Members Present:

Mike Asoodeh
Ram Ramanujam
Clarence Copeland for Beth Courtney
Brian Nichols
Gene Fields
Richard Howze
Lonnie Leger
Charlie McMahon
Ramgopal Mettu **via telephone**
Bettina Owens
Ramu Ramachandran
Michael Stubblefield
Greg Trahan
Rachel Vincent-Finley

Council Members Absent:

Terrence Ginn for Commissioner of H.E.
Thomas Lovince
Tony Moore
Eric Setz

Guests:

Leo Tran
Hunter Ely, Tulane Security
Charles Broome, UL Lafayette
Sam White, LSU
Angela Mastainich, BoR
Tim Magner, LSUHSC-Shreveport **via telephone**
Le Yan, LSU
Carl Brandt, PN Tech
Seung Jong Park, LSU CCT
Brad Booth, Intel

Gwen Dodpe, LSU
Ethan Bateman, LSU/LONI
Lisa Giaime, LSU/LONI
Gary Canzonein, LSUHSC-NO
Ric Simmons, LSU
John Caffery, LONI
Gary Mumphrey, LONI
Philip Stott, LONI
Patrick Kennan, LONI
Jan Waguespack

APPROVAL OF OCTOBER 13, 2015 MINUTES

Dr. Michael Stubblefield asked everyone to look over the October minutes. Dr. Ramanujam questioned the recommendation in the minutes relative to the Allocations Committee, copy with his edits in file. He wanted clarification on the suggestion that each institution nominate members and if all would be voting members. He found this inconsistent with the motion that had been voted on. Mr. McMahon stated that the large allocations committee was made up of only a few members, Dr. Ramanujam stated that the Queen Bee allocations committee was made up of only five members. Mr. McMahon further stated that they wanted the allocations process to be moved into the hands of the researchers. He thinks it should be left to the Allocations Committee to work out and if anything creates a problem, which hasn't happened in ten years, but if something arises that the researchers can't work out among themselves, they can come to us for assistance. In his opinion, they have been doing a fine job and he thinks the less we meddle with what the researchers are doing, the better off we will be. Dr. Ramanujam stated that he thinks that the allocations group should work the way they choose, but we need to set up some by-laws, some basic structure, given that we have gone from a distributed resource, like Queen Bee, to centralized resource, like Queen Bee 2. Mr. McMahon further stated that even though we did have a physically distributed model, we always thought of that as one pool of resources. Mr. Leger stated that the way the allocations committee works is based on a peer review process. We rely heavily on those in the main sciences to review the proposals being submitted to substantiate a genuine request for the size of the allocation being sought. The committee has to have some domain science capability to review the requests. The representation of the Allocations Committee is a limited set, they have to make decisions and policies. This is typically surrounded best around a small group of people that have a similar motivation and commitment to accomplish the task. Their internal structure back to their institution can be as limitless as the size of the institution by which that person should be able to call upon, resources within their system to substantiate the person making the request. Mr. McMahon asked Mr. Leger what percentage of the cycles are actually being used on a regular basis? Mr. Leger referred the question to Le Yan. Mr. Yan responded that on QB2, it's about, on average, 70%. Mr. McMahon stated that sometime next year LONI will have to start making hard decisions because we will fill the machine up. Dr. Stubblefield questioned the motion from the last meeting, the motion was to establish a limitless committee and was approved? What he is understanding today is, the global Allocations Committee is finite, represented by the member institutions, but each campus can create a sub-Allocations Review Committee with a limitless number? Mr. Leger stated "in a sense, yes". Dr. Ramanujam asked "what are they going to review"? He thinks we are looking for expertise which is different, you can always request additional reviews. Mr. Leger stated that was what he was trying to differentiate between the original

motion of the body to mimic the Council versus everyone wishing to be part of the process. This is a peer review process and, at times, it takes a domain specific individual to review it that is “qualified” to make that decision. Mr. Leger further stated he wanted to differentiate between the standing committee within the Council versus an at-large allocations committee that would be managed at the institution level. Mr. McMahon stated he remembered the part of the discussion was about the small allocations. While we don’t have these distributive machines, we still want to allow small allocations where control of who gets to use those cycles rest within institutions. That is where he thought the discussion was about having a larger and local review process, that mirrors what the Allocations Committee does. Example, if someone at Tulane ask for a small allocation, we don’t go to the Committee, we take it out of the Tulane’s small allocation and they jury that internally. Dr. Ramanujam stated an example, if someone in the UL System request a small allocation, the representatives on the Allocations Committee are responsible for the small allocations requests coming from their system. Dr. Ramachandran stated that the five campuses that had hardware in the beginning, they all had someone on the Resource Allocation Committee, so whenever a small allocation request comes in, they are pinged by the website. But, if a request comes in from Grambling or another university where we did not have hardware, there lies the question of who should make the decision. His suggestion is that every campus that is connected to LONI should have a small allocations person, separate from the large Allocations Committee. Dr. Ramachandran stated that Dr. Ramanujam is talking about two different things, one is the Allocations Committee and then the policy on allocations which is how do we deal with small requests, how often does the Allocations Committee meet, and so on. He further stated that it may be useful for the Council to set up a working group with the motion that was passed, which is, the structure of the Allocations Committee reflects the structure of the Management Council. Dr. Stubblefield suggested that since we were at the stage of approving the minutes, Dr. Ramachandran stated we could discuss this other business. Dr. Stubblefield stated there were no questions about the content of the minutes, Dr. Ramanujam stated he had a question about the content of the minutes, about whether they were vote or not? Dr. Stubblefield suggested that the contents were misstated in the motion were appropriate. That being the case, we need to figure out the process that you want to execute this motion. Dr. Ramanujam further stated that in the minutes there are two things that are written as if they were passed, one was the institution can appoint as many members as needed. Mr. Leger offered a motion to the Council, the executive leadership of this Council and Mr. Leger, work to clearly distinguish between the written record, the difference between large allocation conversations, small institutions, because they run so close together in word and thought, that there is no distinction. We want to be distinct. He would like to remove that, and work on that in our next meeting and clarify that position statement. Dr. Ramachandran stated Mr. Leger is referring to the second part not the first part.

There are a couple of paragraphs to be reviewed. Dr. Ramanujam stated he is uncomfortable approving the minutes without knowing which paragraphs are going to be removed. Dr. Stubblefield stated he thinks it is O.K. to approve the minutes without consideration of the Allocations Committee. Mr. McMahon stated the minutes of this meeting will reflect the discussion and the clarifications that we want to work on. Mr. Nichols seconded that motion. Dr. Ramanujam stated that there were some other minor corrections that he sent out this morning by email, he asked that those amendments also be made for the record. Mr. Leger stated that the motion on the floor is that Dr. Ramanujam review next at the meeting. Ms. Owens stated that some of them were corrections. Dr. Stubblefield stated that the motion is to approve the minutes with the reflection of the discussion and clarification of allocations process to be worked on, particularly about the Allocations component, all in favor of that motion, seconded by Dr. Ramachandran, with no objection. Dr. Stubblefield stated that the second motion is to accept the corrections provided by Dr. Ramanujam, seconded by Mr. Nichols, with no objections, motions passed relative to the October 13, 2015 LONI Management Council meeting.

CHIEF ADVISOR REPORTS/RECOMMENDATIONS

Dr. Stubblefield recognized Dr. Ramanujam. Dr. Ramanujam began by discussing the “HPC Resource Allocations” from his report. He stated that the Management Council voted on a new structure for the Allocations Committee, it will be useful for LONI to know who appoints members from each institution. He stated that the Committee should elect its Chair, define how they operate, and, so on. The basic structure of LONI membership needs to be specified. We may want to state that it would be the Vice President for Research in each System or some member institution. He thinks these are things that would be helpful. The changes in the allocations, due to the fact that we went from one kind of resource to another, all of those in terms of the Allocations Policy should also be revised. He questioned if the Committee should meet once every three (3) months or maybe meet six (6) times a year, to be responsive to allocations. It is up to the Committee to review whether they want a medium allocation policy, if they meet more frequently, they receive a request for 500,000 SUs or higher they meet at a certain frequency. He does not know the State’s meeting rules concerning whether all members are physically present in the same place or if this could be done by email. Dr. Ramachandran stated that currently it is done quarterly by email. Mr. McMahon questioned if this is an official public committee. Dr. Ramachandran replied “no”. Mr. McMahon further stated that the Committee could do their work privately, by telephone or email. Dr. Ramachandran agreed. Dr. Ramanujam added that it would be useful for a smaller subset of the Council to help define these issues and be presented at the next meeting. Dr. Ramanujam asked for

volunteers. Mr. Leger volunteered, as well as, Dr. Ramachandran, Greg Trahan, and Dr. Vincent-Finley. Dr. Ramanujam stated that each institution will nominate a researcher to this group, also.

Dr. Ramanujam stated that LONI has been a premier resource, in terms of high speed networking and high performance computing. As research evolves we need storage support, to support the success of large projects, like Dr. Ramachandran's recently NSF Epscor funded consortium for innovation and manufacturing in materials. We received a request for supporting data analysis and data management support, but all federal agencies have data management requirements, as part of proposals, some do not say how long the data has be kept after the project is completed. The question for LONI is what do we need to support data management efforts for research projects in the state? The issues that need to be addressed are amount of storage, what levels of storage we have, security issues, certainly anything to do with medical research, HIPPA compliance is a big issue. Then, there is the issue of if there is a hurricane, what kind of support do we have for recoverable storage? And, in the long run it may support personnel. It may just simply be contracting this with an agency or software company that does these things. We need to address this issue and he suggested LONI form a working committee to look at these issues and report back to the Council. Dr. Stubblefield asked Mr. Leger if the Council has a general data management plan for the Network? Mr. Leger stated that each institution responds to those agencies that need this requirement, the Council does not have one. The Council does have policies for retention, but he would not call it a data management plan. Ms. Owens asked if it would be for grants? Dr. Ramanujam answered that it would be for grants, but then we have large Board of Regents (BoR) Grants, like the \$20 million grant that the BoR will be required to submit the data management plan. Mr. McMahon stated that at Tulane and at most of the Research 1 institutions, the AAU Institutions, even those schools that are fortunate enough to provide high performance computing resources for their research community, the data management plans including storage requirements, retention of storage, become the responsibility of the researchers. Typically, this is written into the grant, not provided from a central source. He stated that at Tulane and some other schools, if a researcher gets a grant that includes a cost for storage and curation of the data, that should be borne by the grant itself, not by the institution, centrally. In his experience with the BoR, at least in the history of LONI to date, the BoR has not been willing to put resources in to create a large, ever growing, data pool that would be required to support our research for the data management plans. Mr. McMahon further stated that he thinks this would be a tough sell if in the end the recommendation is to go back to the State asking for \$3 million a year to buy storage because when that \$3 million's worth is filled up, we have to keep it, and get more. He thinks this needs to be examined, but he thinks this will come back not just to the schools, but the individual researchers. Dr. Ramanujam stated that he understands, he is not suggesting that we help researchers develop data management plans,

but for large grants that are awarded to the BoR, what is the BoR's support? This is the one that was dealt with in a discussion that Lonnie facilitated, about support for storage for the SIM Grant. He thinks that as long as there are such large awards coming to the BoR, what is their responsibility? Mr. McMahon said he does think that the big EPSCOR Grants that are multi-institutional, the BoR does have a role to play. Dr. Ramanujam stated that we may want to limit the context of that in able to make some progress with the discussion. He questioned if Track 1, Track 2, that are smaller awards will also be included. These are the things that Dr. Ramanujam would like to have reviewed during the beginning of the year. Dr. Stubblefield stated that there was an offer for a working group. Dr. Ramanujam stated that first the Council needs to agree that there is a need to address these issues. Dr. Stubblefield also stated that there was an offer by Dr. Ramanujam to lead, as well. Dr. Stubblefield asked for volunteers. Dr. Ramanujam stated he thought Mr. Leger should be on the working group, additional ones that were volunteered were Leo Tran, Ric Simmons, and Clarence Copeland volunteered stating that he will bring a different perspective from LPB.

Dr. Stubblefield asked for an Economic Development update. Mr. Greg Trahan stated that he has ongoing conversations about LONI as an asset. Dr. Stubblefield stated that we are looking forward to a new approach and priorities by the incoming Secretary. Mr. Trahan stated he frames LONI as an enabler that will help accelerate a project for a client. He thinks the more exposure LONI receives from possible upcoming projects, the more the word will get out about LONI's capabilities.

EXECUTIVE DIRECTOR UPDATES

Mr. Leger asked Mr. Hunter Ely and Mr. Charles Broome of the Security Working Group to update the Council about ongoing activities. They have been contacted by some of the institutions in smaller areas about needing details on counter measures, like Open DNS, they are working to resolve their issues in the next 30 days. As for as their Working Group meetings, they have not had one in the past two months due to holidays, but they plan to reinstate their meetings in February, the second Tuesday of the month. Ms. Owens asked if the Security Working Group has considered a set of standards for every site that is a Point of Presence (POP) that should be adhered to? It has come to her attention that UNO has been bombarded with "Denial of Service" attacks, due to not having their complete network behind a firewall. She thinks that if a user is going to be a POP they should be behind a firewall. Mr. Broome replied that terms of service definitely would get a standard for connectivity but several institutions have been converting from flat networks, and it takes a lot of effort to reorganize. Using the strategies that we are trying to deploy, on the wire, we should be able to mitigate a lot of the impact that was felt by a lot of other institutions. By taking the security and moving it up from the institutions to our service provider's uplinks, mediates having to invest money in every site, now we can share the security

benefits together and also regulate them together. They are trying to identify the standards for a security template that could be applied that each institution could say “yes” we want the one recommended by the Security Working Group that has a list of what we would block by default. Mr. Ely stated that we have this advent of science DMZs, these are the high speed force the network, those are largely not behind a firewalls, yet we fully support them on the network. Additionally, they have been trying to get their heads around whether there are smaller schools that don’t have any sort of security expertise and they are trying to figure out how to break up either the State design geographic zones or something, so that the smaller schools have someone to talk to. That to him is the biggest issue, they don’t know who to reach out to for help. It makes sense to think about basic requirements to be a Point of Presence, but we have to be limber enough to adjust these things, like the Science DMZ which is a fairly new concept. Tim Magner, via telephone, asked how that would work with existing firewall and URL filtering application, would they end up with two applications? Would they have to tweak the global application at the LONI level and also manage the one at their site? Mr. Broome stated that they could override LSUHSC Shreveport by default and provide them with a way to layer their security controls to insure that they have continuity if one fails, they would be able to consume a preset standard. He stated that they would not have to subscribe to it, but it is a free service that they are planning to provide on the network. Mr. Ely added all they are interested in at Open DNS, in particular, is blocking known bad threats, BOTnets, and malware sites, only. Everything else is up to the institution to block. He stated that at Tulane, they block all kind of things that are Tulane specific, but this is to block known bad sites. Mr. Leger stated that LONIs position is, not to put any barriers on the institutions to connect or not, but try to do everything on LONIs side, as a result, both the Open DNS procurement and the Accumine Vidal’s protection service are in the procurement channels within LSU to get finalized. He hopes to have those services finalized in the next couple of weeks and have those services deployed. Open DNS will be a little quicker, the Accumine side, it will be a little longer because it is network intrusive. It may be after the spring semester before both of those solutions are 100% online. Mr. McMahon asked if the pain that was felt from UNO has caused us to consider charging our representatives from that System to go back to the System to let them know that they are causing problems that affect all of Higher Education. He suggest that exposing this to the System level, may get some attention on the resources they need to better protect the network. He thinks we are at that point and asked the Council if they agree. Mr. Nicholls asked about the number of incidents they had last year. Mr. Leger stated that there were three, two were substantial, one was by itself and unrelated to the other failures that were experienced with other ISPs on December 3rd. At that time, they resorted to taking them offline for 4 hours. They felt that was the most prudent thing to do to protect the integrity of the network as a whole. They have looked into whether they need to, he has asked the Security Working

Group, specifically Eric Setz, to look at the specific language that we might need to add to our agreements or use policy that would be more forthcoming with that statement, rather than the action we felt needed to be taken. He stated that the dynamics of security have changed when someone can command control with this and generate a 10 gig flow when we have 10 gigs available on the network. It becomes a saturation issue. Before, 5 years or more, we had the bandwidth, but they did not have the means to reach those theoretical and realistic limits. Now, the software is readily available, which means we have potentially more bad actors on the network with cheap controls that can generate gigs of traffic. That is why the Security Working Group decided that we had pushed this as far out as possible, beyond our edge and take advantage of the Accumine solution, such that, we could tell Accumine, you need to take all of the traffic associated these IP addresses and scrub them, clean them, and give them back to us because they are under attack. Thereby, relieving the pressure we haven't solved when that amount of traffic enters the Network, it essentially chokes due to so much being thrown at us. We thought that 10 gigs between our institutions was enough, and it is on normal business, but not to combat cyber attacks. It is a change in our paradigm in the way we manage things and making decisions of protecting ourselves. Mr. McMahon stated he is very happy with all that Mr. Leger has done to protect the Network at-large, now back to the UNO question, do we as a group need to make a statement about that or just go about our business? Ms. Goodson stated that when it went down, not too long ago, the Division of Administration was calling her because it was affecting more than just the LONI Network. Mr. Leger stated that the Division probably saw some of the ripple. The State has had some ripples, they have had some attacks, as well. Ms. Goodson stated she thinks that UNO needs some help and we need to figure out what we can do, regardless whether it comes from member schools or Council members or from the Division to assist them to correct this because it affects everyone. Mr. Fields stated that when his team is engaged, they are willing to connect and plug-in and assist. The key is building up the identification and the recognition and then the escalation, so that those institutions that don't have those resources have a way to connect to help solve the problem. Sometimes they may have to be out of ban, but maybe building some type of mechanism for all LONI constituents to consume those resources. Mr. McMahon recommended to contact the UL System, a representative from LONI, to express concern about this problem and contact the President at UNO, he is willing to do that, have a conversation to make them aware that this is an issue. He further stated that this is a problem that certainly between the System and UL to solve it. He continued that it is not of a magnitude financially that they can't fix. That is his suggestion. Ms. Goodson stated that ULS has an interim President, and an interim institutional President. She questioned the importance of this matter to the interims in place. Mr. McMahon stated it is important to LONI. Mr. Fields agreed with Ms. Goodson, he thinks that having the conversation is one leg, but second is building

mechanisms for those campuses to connect with TICOS. Ms. Owens stated that she has spoken with the CIO at UNO and they are thinking about contracting with LONI for these services because they do not have anyone that can do the network security there. Mr. McMahon stated that LONI doesn't have anyone to do it. He further stated that this goes to the architecture of their network. Mr. Leger stated that LONI is ready to lend a hand, but the owners of the security and the security policy and practice is the LAN owner. Mr. Nichols stated that this is not anything new, this has been going on since he was an internal auditor, for some period of time. Ms. Owens asked if they do not want to spend the money to get the resources? Mr. Nichols stated that when Jim Burgard was there, it was his understanding that funding was an issue. Mr. Leger stated that they have lost staff over the past seven years, as well. Dr. Asoodeh stated that with everything that has been happening at UNO, Jim Burgard being gone, the effects of Katrina, having an interim President, so maybe with the help of LONI and Mr. Fields, we can intervene to do something. Ms. Owens and Dr. Asoodeh agreed they have problems due to loss of personnel other issues out of their control, Ms. Goodson asked if LONI can figure out a course of action they would have to take to correct their issues. She asked if hiring personnel or bringing in a team to work on the immediate situation, then hire someone, what is the appropriate action? Ms. Owens stated they need an assessment. Mr. Leger stated we can, in the system, make an assessment evaluation. He has talked with David to let him know he is there for him, but it goes back to the Landlord owns the policy and the practice. We are just occupying space. Mr. Leger stated that Charles Broome responded well in October when he requested that Mr. Broome facilitate a request in the same system and he readily assisted the UNO person on-site. That created a dialogue that still remains today. Mr. McMahon stated that if he were in that situation, the first thing that needs to be in place is a modern robust firewall with all the needed power to mitigate the responses, as well as, a modern robust edge router, and make sure there is, at least, one person that is dedicated to the health of those two devices. He stated that if the finances were available, he would put an intrusion detection piece in place, also. His view is that this is two pieces of equipment and one person. Ms. Goodson stated that if this information was printed and given to the two Interims, this would give them a direct path to follow to figure out what they need. This could come from the Council, making them aware of the issue and we recommend these two pieces of equipment and a staff person hire, because this affects everyone on the network. This will give them an idea of what steps to take. Mr. McMahon stated that before he would be willing to put that is writing, he would like for Mr. Ely and Mr. Broome to go on campus and sit down and validate what he has just said to the Council. Mr. Fields stated that he thinks it will take a bimodal approach in order to solve the issue. He thinks having our teams work with and provide those lifelines directly to the UNO staff, in addition to painting the picture of priority, from top down, that is working from the bottom up and the top down, he thinks a

solution can be affected. Ms. Owens suggested that Phil Stott, who is now working for LONI, be involved in the conversations, because there is no one at UNO that knows anything about their network. Mr. McMahon stated that we are talking about a half million dollars of equipment and \$90,000 a year employee. Mr. Fields added that he thinks that Mr. Ely and Mr. Broome can contribute to help UNO to identify the right technology solution, as well as, merging that with the skin ware solution, as well. Mr. Leger stated that he would work with the Security Working Group and reach out to David. Dr. Asoodeh suggested that Mr. Leger reach out to David before the memo goes to the Interim President. He further stated that the current UNO is different than the UNO prior to Katrina and he felt it would not be fair to send the memo without making David aware that it is coming. Dr. Stubblefield stated that we do not anticipate any type of action, we are just doing some information gathering. Mr. McMahon suggested that if we have a plan, he thinks we need to authorize Mr. Leger to bring it to Ms. Goodson to work it through the Board of Regents. Ms. Goodson reminded everyone that she is no longer with the Board of Regents, that Mr. Terrence Ginn is, but she has volunteered to help and participate as much as she can. Dr. Stubblefield suggested that some type of communication be made before we meet again in April. Mr. Nichols stated that this needs to be addressed, hopefully before we meet in April and we are not coming back and no progress has been made. Mr. Leger stated that they have a disgruntled somebody out there that seems to have taken a liking to UNO. He feels that with the accommodation of the Open DNS deployment, the Accumine, and we already have the Security Working Group. He made a motion to authorize the Executive Director to create and establish an Ad Hoc Committee, the Network Advisory Group. This Group would represent and mirror the structure of the LONI Management Council, particularly those partners who purchase internet bandwidth from us. They would be called upon to assist the operations team, the network staff, with recommendations on how to improve our services, exchange of information and assist as we continue to reinvest our plans for the network. He has received a list of everyone's participation and he is ready to begin work with this group. This will be another vector of our communications and strategies technically. Motion seconded by Mr. McMahon, with no objection, motion passed. Dr. Stubblefield requested a list of all the working groups and advisory councils with a statement of what their charges are.

Mr. Leger stated that there are two Work Plans handouts in your documents, one dated 10/13/2015 which he would like to entertain a motion from the Council to accept the Work Plan that was delivered on October 13, 2015. Motion was made by Dr. Asoodeh, seconded by Mr. Nichols, with no objection, motion passed. Mr. Leger went over the January 12, 2016 updated version of the Work Plan and discussed the items that have been completed, indicated by the check in the box. He stated that they were able to fill some staff position in December. Some of the new staff members have come from the HPC

side, he asked Mr. Sam White to introduce the new staff that were able to attend the meeting. Mr. Leger introduced additional new staff and went over their responsibilities.

Mr. Leger stated that at our last meeting he was asked to provide an outage report, breaking down the outages. He invited Mr. Ethan Bateman to today's meeting to discuss a report that was requested. Mr. Bateman gave an overview of the LONI Outage Reasons report. He went over the ways member now have available to receive information about outages, via Twitter accounts and SMS. He also stated that a user can still contact a network operations center by telephone and ask an analyst what is going on.

Network Update

Mr. Leger went over the Network Update information provided to members.

OLD BUSINESS/NEW BUSINESS

Dr. Stubblefield asked if there was any additional business to come before the Council, there was no response.

ADJOURNMENT

There being no further business to come before LONI Management Council, Dr. Stubblefield asked for a motion for adjournment. On a motion by Mr. McMahon, seconded by Dr. Ramanujam, the meeting was adjourned at 2:30 p.m.