STATE OF NEVADA

GOVERNOR'S OFFICE OF SCIENCE, INNOVATION & TECHNOLOGY
100 North Stewart Street, Suite 220
Carson City, Nevada 89701
775-687-0987 Fax: 775-687-0990

Brian Sandoval
Governor

Brian L. Mitchell
Director

PUBLIC MEETING MINUTES

Name of Organization: Computer Science Subcommittee

Date and Time of Meeting: Tuesday, May 29, 2018 @ 3:30 pm

Place of Meeting: Nevada State Library and Archives
Governor's Office of Science Innovation and Technology
100 North Stewart Street, Suite 220
Carson City, NV 89701

Please use the following numbers to join the conference Call:
North: 775-687-0999 or
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I. Call to Order / Roll Call
Chair Mark Newburn

The Computer Science Subcommittee was called to order by Chair Mark Newburn at 3:30 p.m. on May 29, 2018, on the tele-conference remote site, listed above.

Members Present
Mark Newburn
Cindi Chang
Dave Brancamp
Frank Matthews
Kimberly De Lemos
Melissa Scott
Irene Waltz
Jonathan Reynolds

Members Absent
Dr. Andreas Stefik
Heather Crawford-Ferre
Dr. Pavel Solin
Kindra Fox

Kris Carroll
Rob Sidford
Jaci McCune

Staff Absent
Brian Mitchell

Staff Present
Debra Petrelli

A quorum was declared.

II. **Public Comment** (No action may be taken upon a matter raised under public comment period unless the matter itself has been specifically included on an agenda as an action item.)
Chair Mark Newburn

There was no public comment.

III. **Welcoming Remarks and Announcements**
Chair Mark Newburn

Chair Newburn welcomed everyone.

IV. **Approval of the Minutes from the April 27, 2018 Meeting** (For possible action)
Chair Mark Newburn

Chair Newburn asked if there are any corrections to the April 27, 2018 Minutes as written. None were made. Mr. Brancamp made a motion to approve the Minutes of April 27, 2018, as written. Ms. Scott seconded the motion. The motion passed unanimously.

V. **Update on Nevada Computer Science Summit** (For possible action)
Chair Mark Newburn, Cindi Chang

Ms. Chang updated the subcommittee on the upcoming Computer Science Summit taking place in Las Vegas on June 18, 2018 at University of Nevada, Las Vegas (UNLV). She said the details are almost complete with 161 total registered individuals including the majority of school districts within the state. She said the Expanding Computing Education Pathways (ECEP) alliance grant funding is supporting travel for four school districts to the summit. She said five universities and colleges will be represented at the summit, to include University of Nevada, Las Vegas (UNLV), University of Nevada, Reno (UNR), College of Southern Nevada (CSN), Touro University Nevada and Nevada State College. She added Mr. Frank Woodbeck, Executive Director for Workforce Development at Nevada System of Higher Education (NSHE) will also be attending, and possibly Senator Joyce Woodhouse. She said a mobile app will be available for the event which will include the agenda, and the ability to scan (check-in) attendees with their smart-phones. She said the cost for breakfast and lunch, as well as parking passes have been included in the event contract with UNLV. She continued to discuss details of summit breakout sessions and strategic planning with the subcommittee.

Chair Newburn asked whether there will be news coverage at the summit. Ms. Chang replied a press release had been sent out by the Department of Education.

VI. Discussion on Guidance Document and Frequently Asked Questions (FAQ) Document
(For possible action)
Chair Mark Newburn

Chair Newburn said at the last meeting of the Computer Science subcommittee there was discussion on providing guidance to counselors, administrators and teachers on when to use math or computer science as a fourth math or third science credit. He said he had talked with Kristopher Carroll, K-12 Regional Science Trainer at Regional Professional Development Program (RPDP), about the recommendation that a student have at least one health science and one physical science credit. He said Mr. Carroll agreed with this recommendation. He said in math it is also recommended by the National Council of Teachers of Mathematics (NCTM) that a student take, at the least, Algebra II, and suggested that should be cited in the FAQ guidance document. Ms. Scott asked what the timeline is for the completion of the FAQ document. Ms. De Lemos commented that by September 2018 would be ideal. Chair Newburn suggested they include input and feedback from the Computer Science Summit in the FAQ document, which should work with a September 2018 deadline.

Ms. Chang asked for clarification on the guidance documents and whether its main focus is on the one-half credit graduation course specifically, or rather on SB 200 as a whole. She pointed out she currently is working on two separate guidance documents, based on recommendations from the group. She asked whether both documents would be due by fall of 2018. Ms. De Lemos said it would be ideal for both documents to be completed by that time. Ms. Chang replied that the group will need to nail down the standards that will be used for that one-half credit course. She added that sufficient time will be needed for these FAQ documents to pass through committees, from both Washoe and Clark County School Districts, as well as any other entities, and then getting feedback and finalizing by September 2018. Ms. Scott agreed that process needs to be started very soon. Chair Newburn asked whether the FAQ document on the one-half credit course, could be distributed as is, at the Computer Science Summit. Ms. Chang said she would fear that some people may think that is the final document, rather than a draft document. She added the current FAQ document has not received any feedback or outside suggestions at this time.

VII. Discussion on Recruiting and Training of Teachers (For possible action)
Frank Mathews

Chair Newburn asked how the state is doing regarding recruiting and training teachers for the changes in computer science. Mr. Matthews, with the Technology Division of the Southern RPDP, said they are doing well. He said they will be conducting a five-day training course in Washoe County beginning on June 11, 2018 through June 16, 2018 for approximately 25 teachers, consisting of almost all of Elko County's computer science teachers and a significant portion of Washoe County's computer science teachers. He said beginning June 18, 2018 and going through June 22, 2018, they will have two cohorts in Las Vegas, for approximately 60 teachers on Computer Science Discoveries. He said the week of June 25, 2018 through June 29, 2018, they will have approximately 42 computer science teachers taking the Computer Science Principals course. He pointed out these numbers have increased significantly since last

summer. Chair Newburn asked with regards to teachers being recruited, whether librarians will be utilized to teach computer science. He pointed out that Dr. Pavel Solin is currently working with public libraries to teach computer science. He asked whether there is an effort to bring in librarians and whether they have an interest in teaching computer science, as they are already information science professionals. He asked for thoughts on recruiting librarians to teach computer science. Mr. Mathews responded that RPDP offers the necessary courses for licensure to be a librarian, one of which is a technology course for librarians. He pointed out that this year is difficult because many schools have cut-out the position of Librarian. He said as a course throughout the year, RPDP is concentrating more on teachers and utilizing librarians as support more for elementary school Computer Science Fundamentals, because they have more of a direct impact on students. He agreed that the Librarians are important, however RPDP is currently concentrating more on the classroom and teachers. He added that in Washoe County, who has asked to participate in a library program, RPDP has been doing online, distance-learning with libraries, which currently there are approximately 10 teachers working toward library certification to RPDP's program. He said the program will be pushed throughout the state as teachers are interested. Ms. Chang suggested as RPDP reaches out to various schools and librarians to also make them aware of the Computer Science endorsement. She added that RPDP is currently making it very accessible for teachers to get the endorsements they need for teaching computer science. She said on-line courses as well as every other course for new endorsements will be available in the fall of 2018 and the spring of 2019, making it very accessible for all teachers.

Mr. Reynolds asked what the role of paraprofessionals is in Computer Science, in general. He pointed out that many schools, especially in the rural areas use paraprofessionals. Mr. Matthews said several schools have inquired about that topic to RPDP. He suggested those paraprofessionals utilize Computer Science Fundamentals or Computer Science Discoveries courses, and added he is very aware of the rural areas and RPDP does offer those computer science classes. Ms. Scott pointed out there are no regulations regarding paraprofessionals and teaching as long as a teacher of record is the one giving out grades to students. She agreed it would be a good thing for paraprofessionals to be trained in computer science. Mr. Reynolds said it would be a good idea to have some guidance for paraprofessionals in the rural areas. Mr. Matthews responded that RPDP has a Computer Science Fundamentals for K-5 trainer in the Elko area and Carson City area, who will be contacting those rural area schools. Mr. Matthews said RPDP has just rolled out this program in April and May 2018 in Clark County. He said training will start next year for K-5 teachers in Northwest and Northeast Nevada, and added that Jaci McCune, who is with the Northwest RPDP, will be assisting Code.org and College Board with Computer Science Discoveries in Northern Nevada next year, as funding issues forced RPDP to cancel this year. There was further discussion on funding sources and other issues for training teachers, as well as what the focus will be for RPDP in the next year.

VIII. Discussion on Future NSF and DOE Grant Opportunities (For possible action)
Chair Mark Newburn

Chair Newburn said over the last month he has received various emails regarding grant opportunities and not being notified until the end of the process, not allowing adequate time to turn around a proposal. He pointed out this is not a good strategy. He suggested a conversation on a better way to identify grants and notification to the subcommittee in a timely manner. He said to go after some of these grants as state, it is necessary to know about them

early in the process. Ms. De Lemos agreed and further discussed the grant process in the Clark County School District. She said she is not familiar with state-wide grants and unsure of that process. She added that with Clark County School District it is beneficial to know of a grant and prepare for it at least six to eight months ahead. Ms. Scott asked whether it is OSIT's job or the job of individual subcommittee members to look for these grants, and added it would be beneficial to identify who will be on the lookout for grants as an important first step. There was further discussion on several recent grant requests for applications that were received, related to state education from the Department of Education, which were far too late in the process to apply for. Ms. Scott said if OSIT could flag these grants earlier it would be helpful and asked whether OSIT had a grants person on staff. Ms. Petrelli responded there is a grants dedicated person on the OSIT staff and suggested that Mr. Mitchell, who is not present today, join this discussion. Ms. Scott said she does believe it would be helpful if OSIT could be on the lookout for these grant opportunities.

Chair Newburn suggested this topic be further discussed at a later meeting of the Computer Science subcommittee to put a strategy in place for future computer science grant opportunities.

IX. **Discussion on Changes to the 1/2 Credit Graduation Requirement** (For possible action)
Chair Mark Newburn

Ms. Chang said the suggested K-12 Computer Science Standards and K-12 Technology Standards were compiled together for the one-half credit course, and that information was distributed to all members of the subcommittee at the last meeting. She added that so far no comments or suggestions have been made. Chair Newburn said the next step would be to present these one-half credit graduation requirements to a broader group for feedback. Ms. Chang suggested a task force be put together to present them to school districts for feedback. Mr. Brancamp agreed and said with other suggestions and comments it will assist in the reinforcement of the requirements and help to make any adjustments needed before they go before the State Board of Education. Chair Newburn pointed out there are two elements to this topic, including what goes into the regulations and those descriptions of content being at the highest level. He said this subcommittee is attempting to put together a guidance document to make suggestions on specific standards that should be covered. He said he does expect the regulations to go before the State Board of Education, however he does not expect the guidance document to go before the State Board of Education. Ms. Chang agreed that the guidance document would not go before the State Board of Education, however, it is important that feedback is received on the guidance document by including others who may have recommended changes and/or additions.

Mr. Brancamp commented that a "Guidance" document being put out by this subcommittee is only that, and a school district does not have to follow it, but rather they can make their own choices as long as it fits within the broad spectrum of the regulations. He added if the guidance document suggestions are the "bare-minimum" then the document must be run through the process of the Academic Standards and the State Board of Education. Ms. Chang commented it would be helpful to school districts to have this document as a place to start. Ms. De Lemos said the guidance document will be helpful to Clark County School District because with the many schools within the district, it will assist in bringing continuity as well as clarification.

There was further group discussion on whether the guidance document should read, "…these are the recommended standards covered" or "…these are the standards that shall be covered." Ms. Scott said her opinion is to put it in a guidance document then go through the regulatory process and put it into regulations. She pointed out this has been a problem with the one-half credit in the past. She said if you do not put the standards in regulation, there is no way of knowing what is covered when regulations have no guidance or structure. Chair Newburn said he believes the subcommittee should go forward with the broad-stroke of information within the guidance document and Ms. Chang should convene a broader group of experts to review the recommendations on the standards plus the recommendation of whether it should just be used for guidance or whether it should be mandated.

Ms. Chang commented on the two-part document revising Nevada Administrative Code (NAC) 389.450 (Prescribed courses of study for graduation) and NAC 389.664 (Units of credit required to receive standards diploma) that was submitted to the Legislative Council Bureau (LCB), which also references the one-half credit regulations. She said she received the language back from the LCB and found it was not what the subcommittee had originally submitted. She said she spoke with the LCB writer today regarding those changes. She said NAC 389.450, which amended "use of computers" to "Computer Science and Applications," was never received by the LCB writer, so none of those changes had been made. She added this will not go on the June 2018 Board of Education meeting agenda, but anticipates getting the language cleaned up in time for the July 2018 Board of Education meeting. She said the LCB writer also informed her that "Computer Science and Applications" was changed to "Computer Education and Technology," as called out in SB 200. Chair Newburn agreed with this name change as long as the broad-level descriptions of what that means is included. Ms. Chang said in regards to the broad-level description, in NAC 398.450, where it lists the courses of study for graduation, i.e. "Mathematics" lists all courses of study and "Science" lists all courses of study. She pointed out that the only mention of "50 percent of instruction time" is listed as "Computer education and technology, which must dedicate at least 50 percent of the instruction time for the course to computer science and computational thinking and may include the following courses of study….," which is all now listed under NAC 389.450. She pointed out that the current antiquated "courses of study" list will be replaced with the high-level computer science concept subject areas as requested. She said she will put this back together and resubmit it to the LCB for finalization. The group had a discussion on the name change to "Computer Education and Technology," and agreed the change, which was not their first choice, will still work. Chair Newburn said this includes the regulation piece and the actual standards piece, which will be opened up to some broader input, changes or suggestions and then getting feedback on the recommended mandates.

X. **Discussion on SB 200 Section 3 Computer Ed Tech Before 6th Grade** (For possible action)
Chair Mark Newburn

Ms. Chang said in attending a training course last month, questions came up from elementary administrators and elementary teachers about what should be taught in Computer Education Technology (CET) before the sixth-grade, which is similar to the one-half credit graduation requirement. She asked whether guidance could be provided on what should be taught in the elementary realm for CET. She asked what the consensus of the group was and whether they should put together a guidance document on this subject for K-5. Chair Newburn asked whether the CET Standards are up for revision. Ms. Chang responded they are up for revision

in the fall of 2018. Chair Newburn asked how a guidance document would tie into the work that will be done in the fall, and suggested that the writing team for those updated standards be tasked with this work under the umbrella of SB 200. He added SB 200 requires that CET shall occur before the 6th grade, and suggested the subcommittee present some guidance and/or thoughts for consideration based on the current standards, then allow the CET standards writing team to complete the guidance document for the Computer Education Technology Standards, as they are the experts.

XI. **Consider Future Agenda Items for the Next Meeting** (For possible action)
Chair Mark Newburn

Chair Newburn suggested a report from the Computer Science Summit and discussion on feedback from the Summit be a future agenda item. Ms. Chang asked whether there is a formal procedure they will use to collect feedback from the summit. Chair Newburn pointed out that normally at the end of a summit, there is a survey and possibly that might be a good place for feedback, by asking what other questions need to be answered. Ms. Chang said she would put together a survey for attendees of the Computer Science Summit for distribution at the end of the summit.

XII. **Determine Next Meeting Date** (For possible action)
Chair Mark Newburn

The group discussed dates for the next meeting. It was agreed it should take place after the Computer Science Summit on June 18, 2018. The group agreed that late July, 2018 would be appropriate.

XIII. **Public Comment** (No action may be taken upon a matter raised under public comment period unless the matter itself has been specifically included on an agenda as an action item.)
Chair Mark Newburn

There was no public comment.

XIV. **Adjournment**
Chair Mark Newburn

Chair Newburn adjourned the meeting at 4:50 p.m.