

**San Diego Unified School District**  
**I21 Broadband Subcommittee**  
**March 10, 2014**  
**JRRTC/SDCOE**  
**Communication Lab**

Present:	Scott Barnett .....	SDUSD Board of Education
	Bruce Braciszewski .....	Classroom of the Future Foundation
	Michael Bruner .....	Jackie Robinson YMCA
	Blair Davey (remote) .....	AT&T
	Steve Clemons.....	SDCOE
	Sharon Curtis .....	San Diego Unified School District
	Jim Day .....	Cisco
	John Garbaldon .....	Time Warner
	Mikel Haas.....	County of San Diego
	MyMy Lu .....	Cox
	Tim McClain .....	County Board of Supervisors
	Jeremy Recktenwald .....	San Diego Unified School District
	Matt Spathas (remote) .....	SENTRE Partners
	Vance Tester .....	Qualcomm
	Paul Villigan (remote) .....	AT&T

Bruce Braciszewski called the meeting to order at 3:40 p.m.

**Summary of Last Meeting**

The group discussed specific solutions and came up with some recommendations. Jeremy recapped the key issues. Broadband is a connection to the internet that is faster than dial-up speeds and supports learning anytime, anyplace and any pace. It can be wired or wireless. The FCC defined basic broadband speeds of 4mb, but in today's world, 12mb is needed. The group looked at 4G as another way to go as it provides more speed and mobility and is flexible. The committee came up with the following key broadband issues: wired or wireless, access and equity for all students, school/home/community/city, affordability/high speed, sustainability, and parent engagement. The group also discussed considerations and options for the key issues along with future challenges. Learning of the future requires all students to have mobile access to broadband connectivity 24/7 anywhere and anytime. This is now essential and can no longer be treated as supplementary. Just as the other essential pedagogical practices are funded through the district general fund, a shift to this model of providing broadband connectivity to all students in SDUSD is our recommendation. Vance added that this should be the guiding principle. Jeremy added that taking away connectivity is not good practice. The group agreed that broadband can be provided to the students' homes with a wired connection, but once inside the home, students should have wireless access. He referenced Vance's email regarding student devices. The devices placed in the students' hands should be capable of connecting in all three ways, wired, Wi-Fi, and 4G. Considerable funds have been invested in our existing laptops which do not have 4G access, but when deciding what to buy in the future, devices having all 3 ways to access are recommended.

**Discussion of Key Points and How to Get There**

Vance asked if this committee should decide if the general fund pays for this. The future of education is not "going to be" this way, it is this way now. We don't want to turn off the administration by expecting them to fund it all, but it needs to be put into the long-range plan. Buying decisions should be based on this. Steve commented that learning now requires this. You need a sustainable model. Bruce added that we can't go down this road and then say we can no longer afford to do this. Matt shared that the infrastructure committee noted the edge is no longer at the school; it is at the home, no matter what the student device is. He cautioned the group that by making the device too specific, the options will be limited. For example, MacBook Air would not meet these requirements. We don't know what the best model is, whether it is 4G, Wi-Fi enabled, or lily pads at community facilities like libraries. Is there some way we can get there? Is 4G capability essential or is it optimal? The decision-

makers on devices need flexibility. 4G should be enabled in some capacity, whether it be in the student device or the student's phone. Some devices are optimal for education but precluded from delivery. Vance added that 4G alternatives might be OK, but cellular would be a better way to obtain access anywhere.

Jeremy commented that when students have mobile devices, it is more for us to manage; the students must take care of their devices and be sure they are charged, and they can also get lost or stolen. If we want to student to be able to use their device wherever they go, we need 4G. Scott noted that students are given so much in textbooks, and they also forget to bring their books to school.

Scott said that from a policy standpoint, the Board should be given as many options as possible for consideration. They would also like to look at funding options. Matt has done an amazing job chairing this committee; there is an incredible variety of backgrounds and innovative ideas are being presented, and this is not costing the district anything. At some point, professional consultants may need to be hired. There are many details to be addressed.

Matt has been attending most of the subcommittee meetings either physically or virtually. If you get too specific, you get into vendor specific items. One thing is clear and that is getting broadband into the homes, whether wired or wireless. A larger conversation is that broadband is essential for every student and that is actionable by the Board. The digital tools and policy subcommittee is recommending that every student be provided with a take-home device. A standardized model has not been established in the US and it can't be done at this table, but we can get inventive for the next steps to take. All curriculum will be web enabled and digital. This is a fundamental shift. We should be able to get actionable synthesized statements.

### **Review of Statements**

Michael asked to remove the term pedagogical; Vance suggested replacing it with educational practices. Concept of intelligent co-existence and it is flexible enough. Perhaps change 3G to cellular. Develop guidelines ensuring all equipment purchases will be predicated on "intelligent co-existence" or Wi-Fi and cellular broadband in a hybrid system complemented by devices that have both an interface active and resident, thereby creating a safe, affordable, equitable 24/7 connectivity solution. Mobile broadband usually means cellular to most people. We need terminology that is clear and understandable. MyMy suggested the term continued access, wherever that boundary is, is seamless.

### **Costs**

Steven stated that as costs come down, we should head toward 4G in everything. Perhaps by partnering with other school districts like LA Unified, we could leverage the companies to get off their \$50 plans (we cannot afford \$50 for each student, but \$10 per student is manageable). Jeremy added that the plan is currently \$34.99 a month but with e-rate it is actually costing just \$7 per unit. Steven noted that the Fed is moving away from e-rate off campus. We cannot bank on e-rate, and in actuality, we are all subsidizing e-rate. With Connect to Compete, going out to 60,000 home connections could drive down the cost even lower. Steven sees these ideas as actionable. We will need someone to write the RFP, device manufacturers to include 4G (ideal is embedding it in everything) so you won't have to worry about having a specific device. Michael feels e-rate won't last forever, so this has to go bigger than what we are doing. Who will sustain the low rates? The 6-to-6 funding has been targeted throughout the state and is now untouchable. Steven noted that districts need to provide equitably for all students, not just those families that get free- or reduced-lunches. Requiring this for all 150,000 students could be cost prohibitive. In PUSD, parents challenged the policy because some students were getting this for free and some were required to lease; if you give it to some you have to provide it for all. It is not like free lunches, but gets into the Williams Act. Jeremy noted that we must address the affordability of this; we can leverage our purchasing power to drive down the costs.

### **Parent Engagement**

Community engagement is an important piece. Matt has shared some good examples of how it worked at e3. Maybe there needs to be outreach to get the community up to speed about what we are doing and why we are

doing it and why this is a good thing for students. Matt thinks that will be worked on by the Board. We need to feed the mind with broadband like we feed the belly with food. There are a lot of policy decisions that need to be addressed by the Board. More work needs to be done after we finish this conversation. It is a powerful statement that broadband at a minimum must be wired to the home and at a maximum needs to be available anywhere and anytime. Not district in the country has gone out to the carriers to discuss this. We may need to partner with others to come up with inventive ways that can come out of the box; there are lots of ways to slice this, lots of ways to get there.

John asked what concerns the community has that is keeping them from embracing this service. Maybe a survey can help us understand why 22% are not connected (not because it isn't available). MyMy responded that they did a survey and it was not just the cost factor but relevancy. Many didn't understand how they could benefit from this. "I don't understand it so I don't want to touch it." We need to put it in a way to help them understand. How do we educate them so they can understand its relevancy? We need to develop digital literacy and community engagement to prepare communities for connectivity, realizing that some schools and communities will get there at different times; some are ready and some are not and the rollout should reflect that. Jeremy added that each community is unique and some will require a longer process to get up to speed. Instead of getting this out as fast as we can, we need to have a good grasp of where the communities stand.

### **Further Discussion**

Scott compared this to having a Starbucks on every corner; we could put a "Starbucks" in every school and with their purchases, students get free Wi-Fi. We wouldn't want to operate or maintain them. We can work with the private sector. We pay money to lease pools for our students. He thinks we may be able to build a network with bond money. Once again, the goal is to spend \$6 billion in bond money. How do we leverage that to meet the needs of the schools. Today 58,000 students don't attend neighborhood schools but get on buses. That number will not change dramatically. Let's look at options and give them to the Board. This committee needs to present all the options to the Board for consideration.

Matt commented on the complexity of what is being proposed; there are a whole host of options to explore. This group is coming up with recommendations that are actionable, but engineering solutions around this is too great a task for a 90-day task force. We have come up with setting an actionable vision. The next phase should address how we can accomplish this (when decisions can be made about RFP to carriers, being in the network management business, building a lily pad network, getting broadband into the homes). Maybe we don't go the 4G route, but there should be a large number of locations where they can access the network. We all want action yesterday, not tomorrow, but we need to have the conversation to do it right. Matt added that the other committees are meeting regularly. On the 19<sup>th</sup> the co-chairs will be meeting to synthesize their work. The devices group won't come out and say which device to buy but will define what the students need. Is it a bring your own and try to manage? School districts around the country are moving to 1:1 (take home) devices. Takeaways from each subcommittee will be good, but we will probably need to hire consultants.

Jeremy noted that the co-chairs of the subcommittees may be getting together prior to March 19 to have a meeting of the minds. MyMy suggested getting a list of some nonprofits that are already working with these groups; then talk about literacy and internet safety to protect students. Bruce mentioned that the infrastructure subcommittee has addressed this.

Jeremy asked if there are other points that need to be added to the list. Vance is comfortable with what has been memorialized. You have to start somewhere. From a technological perspective it is important to work with industry partners to stay abreast of new technologies as they unfold. We need to be flexible enough to keep up with the latest developments. An internal process could be created to keep track of technological advancements as they happen. Because of the work of this group, SDUSD is in a better position than other districts.

Matt said when you mention RFP, maybe we should add terms like innovative, reinventing, aggregation of broadband to students and families (aggregation of carriers and/or aggregation of users, i.e., districts, county).

Who might the RFP be coming from and how is it aggregated? Bruce said that some of these considerations should be listed for when the full committee comes together to develop their report. Matt added that collaborative exploration of broadband opportunities to include in RFP; it could also include collaboration of carriers. The county wants to be a part of some kind of solution. Perhaps there is a creative way to look at who the RFP is coming from. The end game is to get broadband to every student in their homes.

Michael suggested we could look at how consistent we are with other groups. Jeremy has all the mid-point reports and has attended other meetings or listened in over the phone and thinks we are all going in the same direction. What comes out of these group may drive some things. Matt suggested starting with actionable things like infrastructure and broadband. Things like finance are more vague, but the idea is to get everything into a concise report with touch points shaped more around how than what and addressing the following considerations: edge, support model, standards/uniformity, automation and digitization, applications, leveraging the cloud, security, policy and culture. We can no longer support technology just at the school but also at home.

Jeremy noted that this group is a little ahead of the other groups; we have defined the edge and it is a good takeaway. The subcommittees have some overriding themes. He pulled up some documents from the i21Now website to share where other groups are at, such as the facilities group co-chaired by Lee Dulgeroff. Sharon said they spoke about actionable items and turned their focus on getting student input from Mission Bay High School using survey monkey. They also shot a video of students giving their input.

Facilities should be community connected; how does broadband cover that? Jeremy said the infrastructure is having wireless in 5,000 classrooms as i21 was being rolled out with two types of connections available. Something we can do that brings in the overriding these is coming up with a guest network, so when someone from the community comes in the door, they can connect. Perhaps a place can be set aside on a school campus. Bruce stated that many elements that relate to physical space could also relate to virtual space.

### **Foundational Questions**

Shaping a vision: how do we ensure equity and access as the district moves toward a digital delivery model to personalize learning? Can a blended district-supplied/BYO device model work in SDUSD? Do the district's current policies need to be reviewed to support the move towards a device being issued to each child? Should we consider different form factors for certain grade ranges? High school students need connectivity wherever they are, and most younger students go directly home after school, so providing broadband at home is more feasible. Should storage be local or in the cloud, online/offline – digital literacy is a big issue. What about support issues for BYO or district-issued. Is there a model for supporting multiple devices? What about classroom management, and in-classroom support? Are we giving parents access to applications? Where is that being addressed? Are we educating students about responsible use and care? The Williams Act requires equitable access to learning devices. These policies will need to come from the Board of Education, not just a committee.

### **Closing Statements**

Jeremy noted that the infrastructure subcommittee is addressing the smart pipes, wiring and wireless. Access doesn't stop on the campus but at the students' homes. What access should they get (the ability to log in to view grades?). We have curriculum and professional development for the teachers. He asked the committee if we missed anything in the broad statements. Scott stated that the Board looks to collaborate with other public agencies to leverage all the resources in the private and public sectors. Working with multiple agencies should drive down the costs associated with connectivity for students. Matt is thinking about how this might need some deeper thought, but there would be nothing that restricts carriers in being collaborative in their response and bid independently or collaboratively in their packages. Some of the carriers have the capacity for both wired and wireless, some don't. We should think about what it should look like (Direct TV)? Part of the RFP might address the range of solutions. Let's think about how to approach the carriers: aggregation of the demand and collaboration and partnering by the solution providers; something that might encourage the partnering of the business partners to look at various solutions. Bruce is an advocate for the inclusion of parents and that there needs to be parent/

community engagement. Michael was impressed with the knowledge base and background of those serving on this committee. Matt added that these are powerful policy conversations that can lead to this kind of thinking. Not only do we have the best sandbox but we have the best players in the sandbox right here in San Diego.

The statements (as modified) are:

- *Learning requires all students to have mobile access to broadband connectivity [24/7](#) anywhere anytime. This is now essential and can no longer be treated as supplementary. Just as other essential educational practices it must be funded through a sustainable source, a shift to this model to provide broadband connectivity to all students in SDUSD is our recommendation*
- *Develop guidelines ensuring all equipment purchases will be predicated on “Intelligent Co-existence” of WiFi and Cellular Broadband in a hybrid system. Complemented by devices that have both air interfaces active and resident. Thereby, creating a safe, affordable, equitable [24/7](#) connectivity solution.*
- *Leverage any and all resources, purchasing power and collaboration with multiple agencies to drive down the costs associated with connectivity services for students. Aggregation of the demand for connectivity with a unique RFP that encourages the collaboration of multiple vendors.*
- *Develop digital literacy, community engagement and parent outreach to prepare communities for the connectivity. Realize that certain schools and communities will be ready at their own pace and rollout should reflect that factor. Utilize business partners who already perform this function in the communities.*
- *Create internal processes that keep track of technological advancements in a timely fashion to allow for flexibility.*

Bruce Braciszewski adjourned the meeting at 5:05 p.m.