

MINUTES
TECHNOLOGY TASK FORCE
One-to-One Governance and Instructional Integration Subcommittee

DATE: August 8, 2011

TIME: 10:00 AM

PLACE: EW41

MEMBERS PRESENT: Reed DeMordaunt, Brian Duncan, Eileen Lento, Salvatore Lorenzen, Christopher Campbell, Bicker Therien

Chairman DeMordaunt asked the subcommittee to complete the *Mobile Device Capabilities and Student Achievement* rating sheet. Each subcommittee member was then asked to rank each item by importance to student achievement. This information will be shared with the Platform, Specifications and Procurement Subcommittee. See the attached document for rankings.

Subcommittee members reviewed the Students Come First Initiative survey. This survey will be sent out to stakeholders via email and will be posted on the Students Come First website. The key focus for responding to the survey will be implementation in high school settings. It was determined no additional changes need to be made. The survey will be administrated by State Department of Education (SDE) staff via the online tool Survey Monkey and results will be ready for review at the next meeting.

The subcommittee adjourned at 12:30 p.m. for a lunch break and resumed at 2:00 pm for a joint meeting the Platform, Specifications and Procurement Subcommittee to discuss device recommendations. Refer to their subcommittee meeting minutes for the discussion.

At 3:00 p.m., Chairman DeMordaunt led the subcommittee in a discussion regarding policy recommendations. DeMordaunt indicated his hope that Idaho would be able to select the best of what is happening in other states and adopt those policies for Idaho. The subcommittee members discussed each policy recommendation as well as heard input from others in attendance. John Neely, Technology Coordinator for Fairfield School District and Sean Cronin, Technology Coordinator for Lake Pend Oreille School District provided valuable insight to the discussion. Lauren Morando Rhim assisted the subcommittee by recording the recommendations in the attached policy document.

Have the other committees been tasked with writing policy that deals with their committee assignments? Matt McCarter, SDE Staff, will contact the SchoolNet subcommittee to discuss.

Garry Lough, Communications Director for the Idaho Education Network (IEN), presented on the Network's bandwidth capability. Lough explained how the

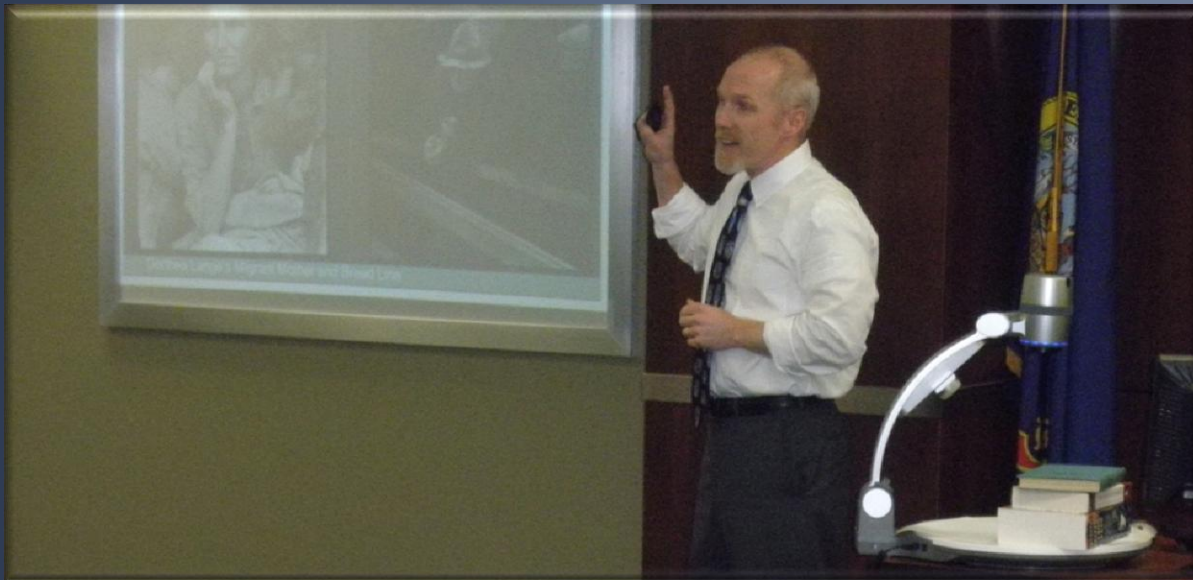
IEN determined how much bandwidth will be needed for each student and school. Subcommittee members inquired about expanding the bandwidth as the needed increased with the one-to-one implementation. Mr. Lough confirmed the bandwidth will be sufficient for one-to-one. The question was asked how schools are implementing and paying for wireless internet. Lough did not have an answer. Chairman DeMordaunt asked McCarter to research this answer. Attached is the PowerPoint Presentation.

Chairman DeMordaunt asked the subcommittee to consider at which schools site visits will be conducted. Morando Rhim recommended a list of specific questions and policies be assembled in order to gain the best knowledge and focus the visits. Cheetham offered to set up some visits with a focus on high school programs.

There being no further business to come before the subcommittee, the meeting was adjourned at 4:30 pm.

Idaho Education Network

Technology Task Force Subcommittee Update
August 8, 2011



The IEN—2011 Computersworld Honors Laureate Award Winner

Genesis of the IEN

- Economics of Education—Scarcity of Resources—Limited Bandwidth, Limited Access to HQT
- Provisioned for growth

Genesis of the IEN

- RFP
 - 1.5 Gbps proposed to 150 HS
 - 10 Mbps per site-Gave Apples to Apples Comparison
 - 2.68 Gbps actual purchased to 194 HS based on our criteria—TB discussed later

Implementation of the IEN

- IEN Program Resource Advisory Council
- IEN Technical Advisory Council
- Two Concurrent Statewide Implementation Efforts
 - Bandwidth
 - Video Teleconferencing Equipment

School Bandwidth in Idaho Pre-IEN

- Varied levels of service
 - Limited market case in some areas to improve infrastructure
- Inadequate Service Levels
- Costly
- Rejected E-Rate Applications
 - 2008-2009 Idaho Schools lost \$1.6 Million in E-rate Applications
 - Consortium has improved applications

Equalizing connectivity

- Used National Evaluation to establish criteria for connectivity to schools.
- IEN Technology Advisory Council
 - Contributed to the formula
 - Before IEN 3.5Kbps per student per second
 - National Ave 6.5 Kbps per student per second
 - After IEN 34 Kbps per student per second

—American Digital Schools study. Data courtesy of Jeanne Hayes (The Hayes Connection) and Tom Greaves (The Greaves Group).

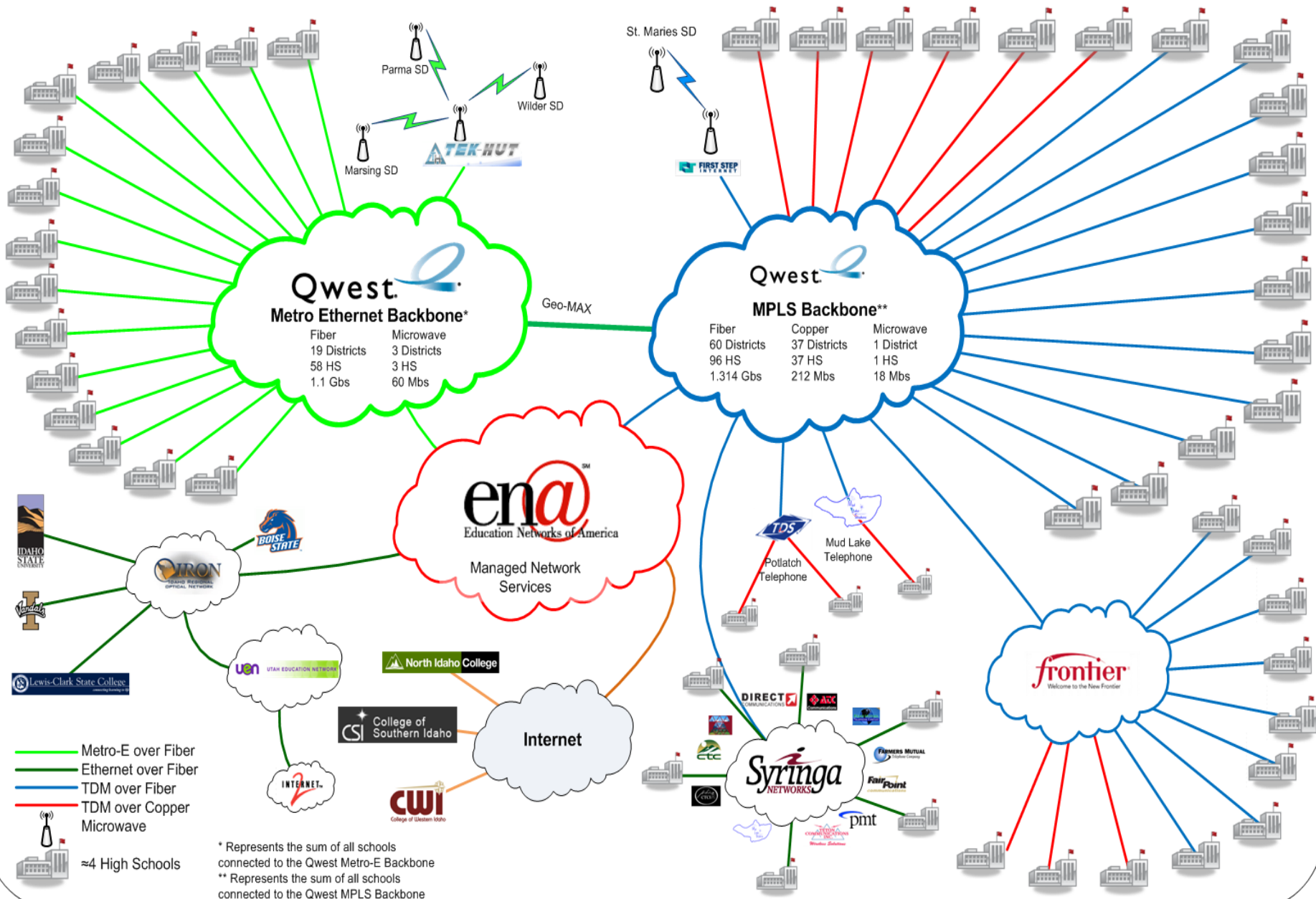
IEN Connectivity Summary

Total Network

- 2.68 Gbs of Total BW
- District BW defined by projected consumption of 33.8 Kbs/student to support a 1:1 Student/Computer Ratio
- High Schools District Connection Media
 - 153 High Schools Connected via Fiber
 - 37 High Schools Connected via Copper
 - 5 High Schools Connected via Microwave

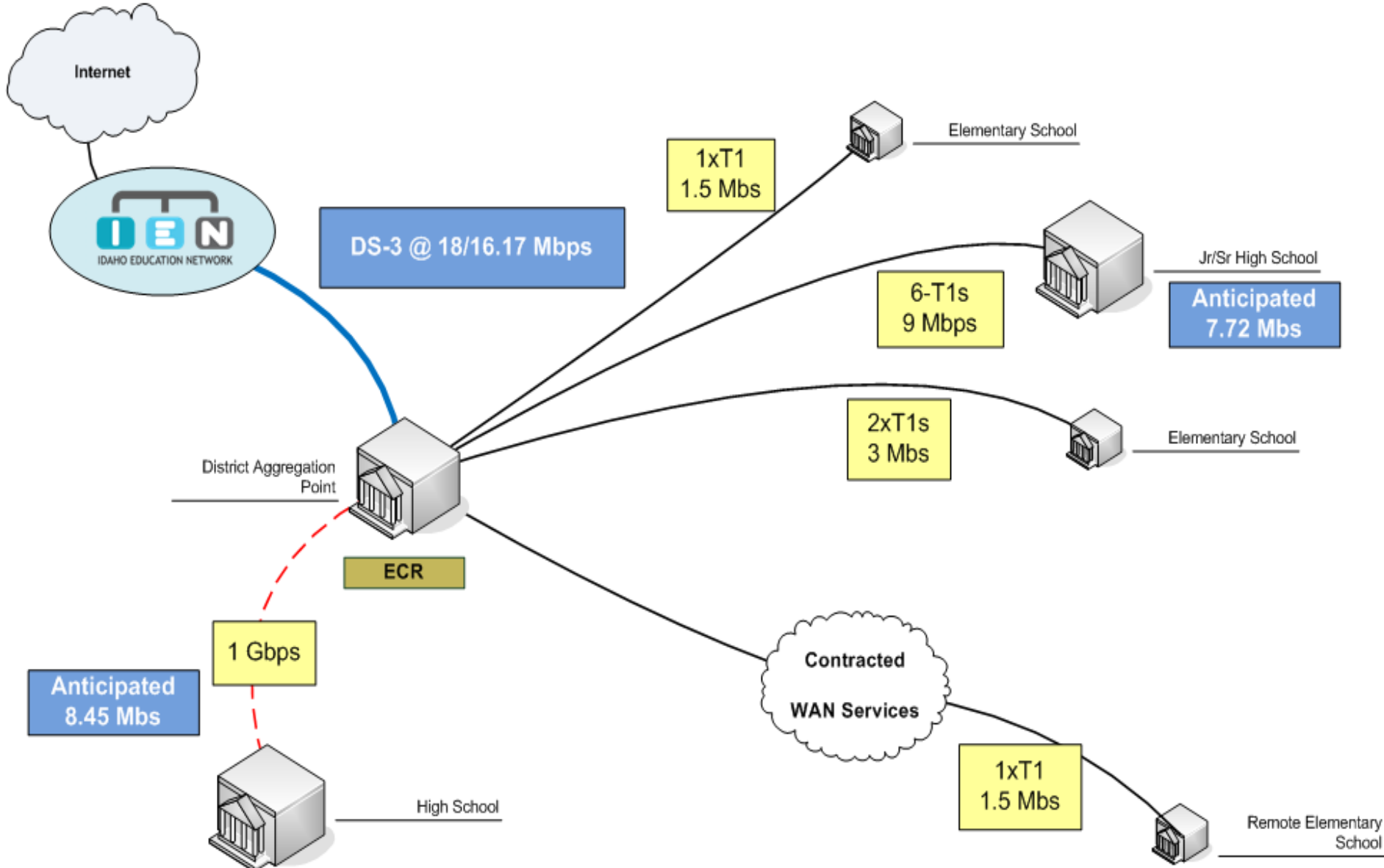
Idaho Education Network Architecture

Architecture as of 07/21/11



- Metro-E over Fiber
- Ethernet over Fiber
- TDM over Fiber
- TDM over Copper Microwave
- ≈4 High Schools

* Represents the sum of all schools connected to the Qwest Metro-E Backbone
 ** Represents the sum of all schools connected to the Qwest MPLS Backbone

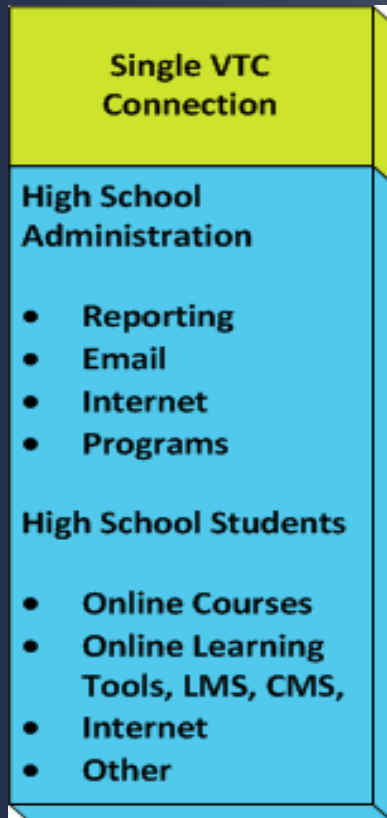


MEDIA KEY

- Customer owned/leased Copper PTP T1s
- - - Customer-owned fiber

IEN Bandwidth Formula for High School Connections

VTC Receive High School



384 Kbs



Preston High School

IEN Formula

$$685 \times 33.8 \text{ kbps} + 384 \text{ kbps} = 23.58 \text{ Mbps}$$

IEN BW Purchased

27 Mbps

Pre-IEN BW

3 Mbps

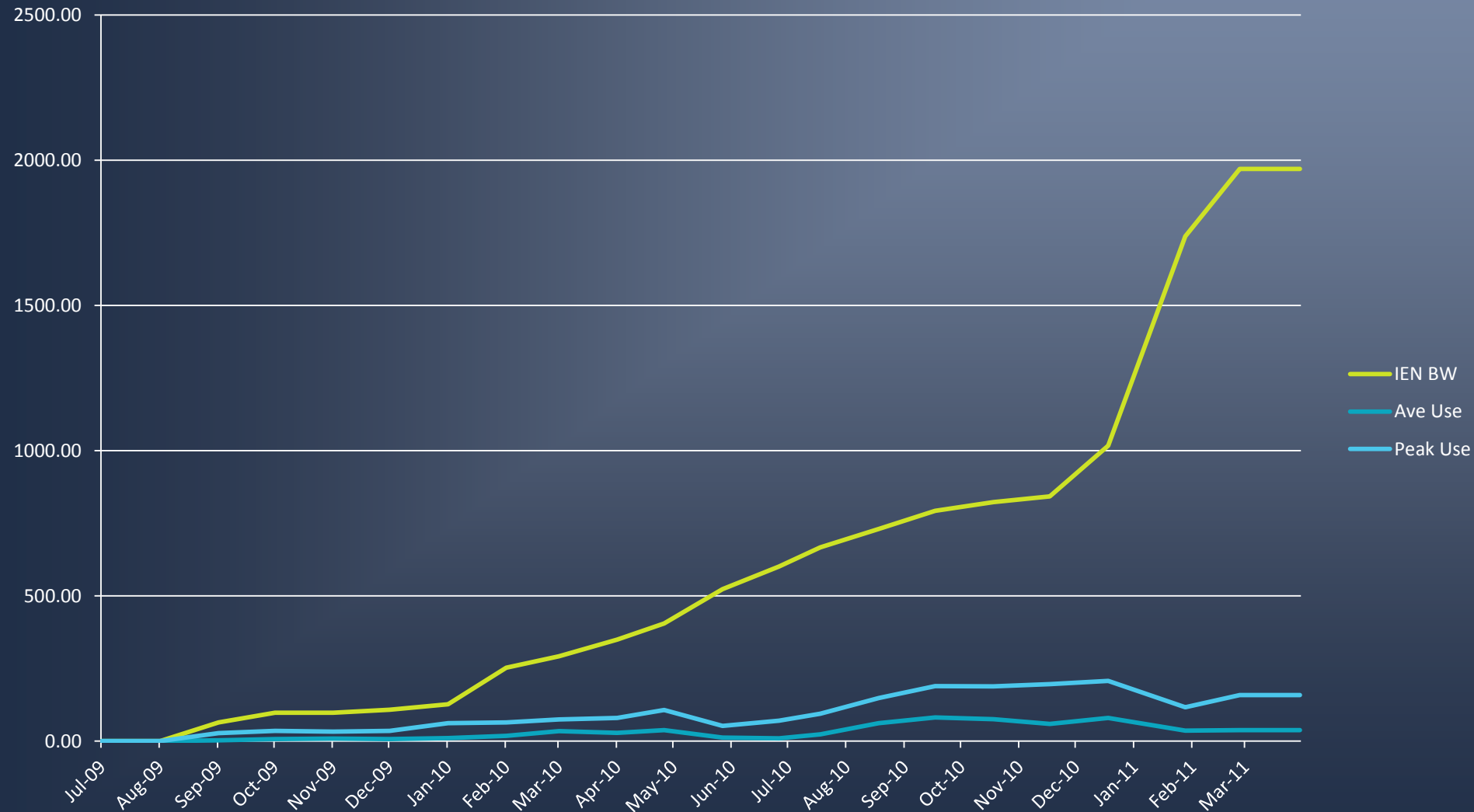
23.58 Mbps



IEN Technical Advisory Committee recommended that the Minimum Bandwidth Standard for a High School is 33.8 Kbs per student with no school receiving less than 3 Mbs.

IEN Bandwidth Utilization

IEN Provided Bandwidth and Utilization

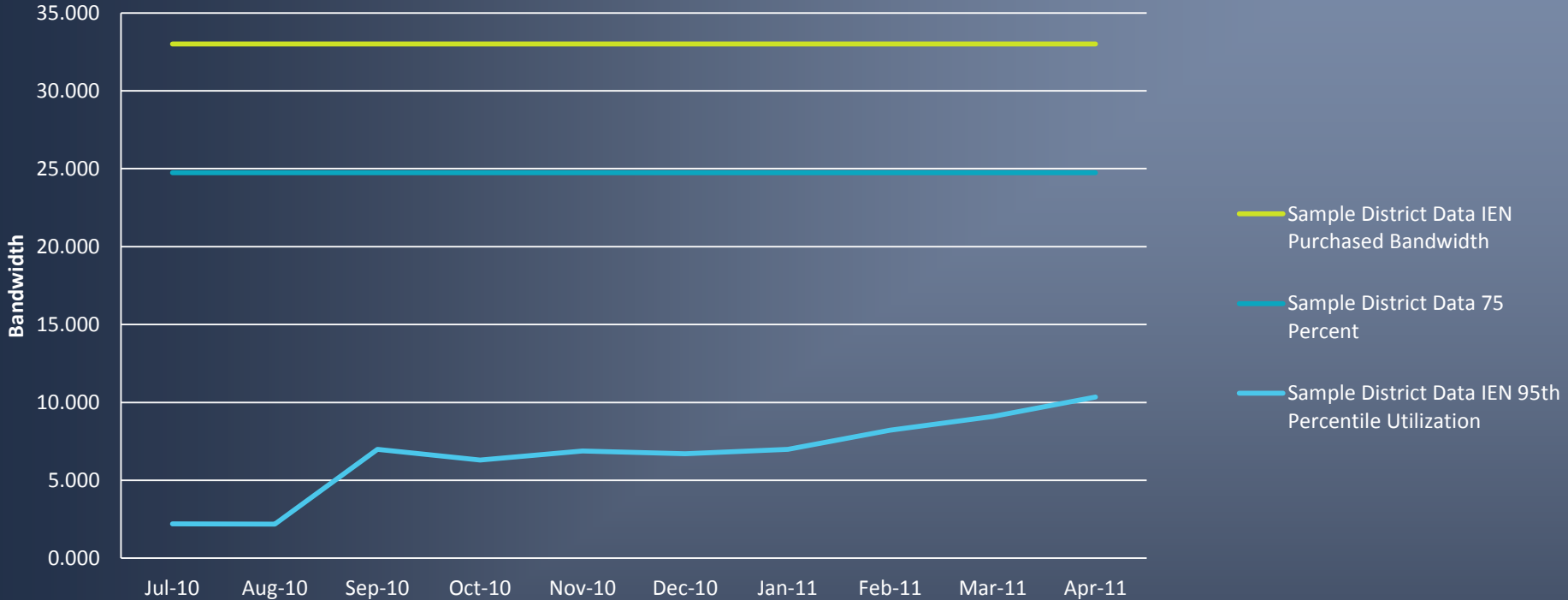


IEN BW Utilization Monitoring

- Monitoring constantly
 - Measuring Outages
 - Measuring Resolution Times
- Criteria for increases
 - State will adjust as sites exhibit 75% saturation rates
 - Provisioned for growth beyond what is currently purchased

IEN BW Utilization Monitoring

Sample District Bandwidth Utilization



District		Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11
Sample District Data	IEN Purchased Bandwidth	33.000	33.000	33.000	33.000	33.000	33.000	33.000	33.000	33.000	33.000
	75 Percent	24.750	24.750	24.750	24.750	24.750	24.750	24.750	24.750	24.750	24.750
	IEN 95th Percentile Utilization	2.200	2.185	6.984	6.309	6.885	6.701	6.984	8.220	9.104	10.339

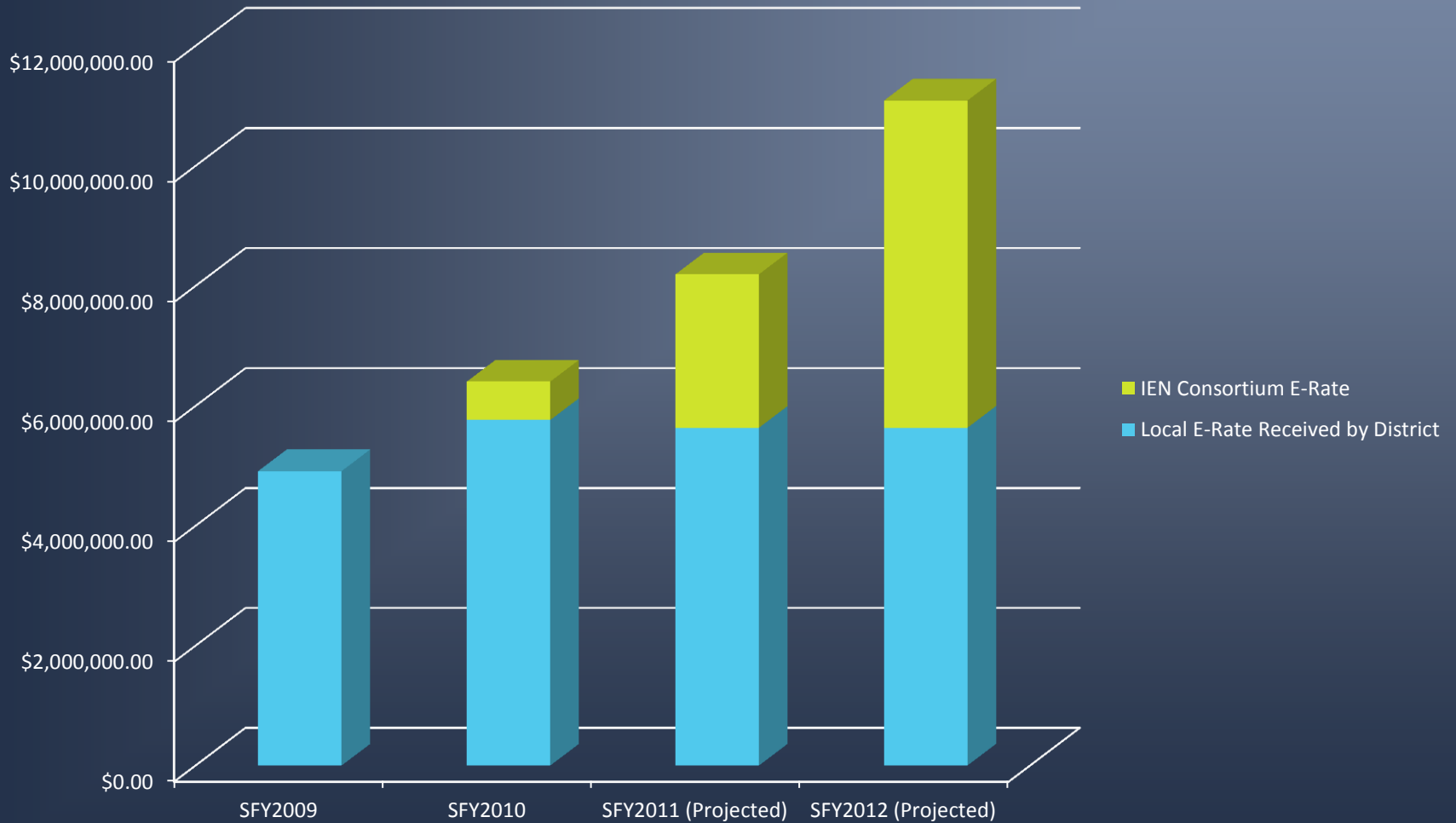
Questions on Bandwidth?

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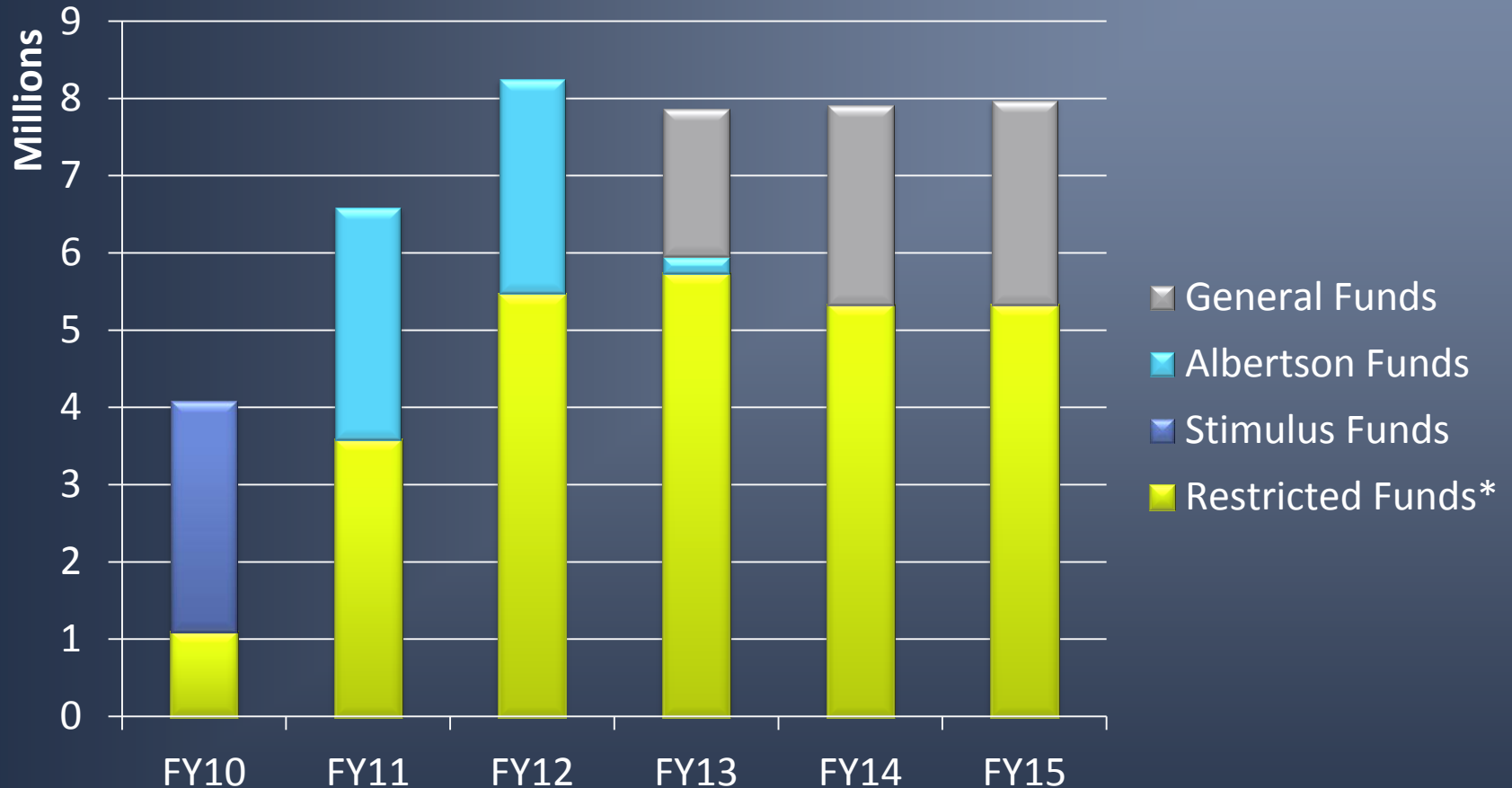
Funding Genesis of the IEN

- Revenue Sources
 - E-Rate (72%, 74% and now 76% Reimbursement)
 - Federal Stimulus (Year One)
 - J.A. and Kathryn Albertson Foundation (Years Two and Three)
 - USDA Rural Utilities Grants (Video Conferencing Equipment)
 - Title IID (Training)

IEN Consortium and E-Rate Impact



Funding forecast by year



* Federal grants and E-Rate

Comparison of State Networks

	UEN	WEN	IEN
Annual Budget	\$35,000,000.00	\$7,200,000.00	\$7,900,000.00
Erate Reimbursement	-\$10,000,000.00	-\$2,000,000.00	-\$5,300,000.00
State Appropriate FY09	\$25,000,000.00	\$5,200,000.00	\$2,600,000.00
Services *	\$18,000,000.00	\$700,000.00	\$800,000.00
Connectivity Costs	\$7,000,000.00	\$4,500,000.00	\$1,800,000.00
Available bandwidth	7.0Gbps	1.0Gbps	2.7Gbps
Employees	120	11	4
Installed IP Video Classrooms	500	116	200
COST PER Gbp	\$1,000,000.00	\$4,500,000.00	\$670,000.00

* IEN/UEN Services include personnel, WEN Services do NOT include personnel

*State Appropriated Figure will only come into effect in FY 2013

Questions?

Garry Lough

Idaho Education Network

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Mobile Device Capabilities and Student Achievement

Device Characteristic	5 (critical for student achievement)	4	3	2	1 (limited impact on student achievement)	No Response
Physical keyboard	43%	29%	29%			
Durable	43%	14%	29%			14%
Touch screen	29%	29%	43%			
Integrated Camera	14%	43%	43%			
High res screen	29%	43%	29%			
Integrated microphone	43%	43%	14%			
Expansion capability (for peripherals)	86%		14%			
Wireless capabilities	100%					
Long lasting battery life	71%	29%				
(software considerations)	29%	29%				29%
Collaboration between students / teachers	100%					
Note taking	71%	14%	14%			
Task management / scheduling / organizing	43%	57%				
Research (internet, data search, etc...)	86%	14%				
Writing / journaling	71%	29%				

Uploading assignments	57%	43%				
Taking assessments	57%	29%	14%			
Presentations	86%	14%				
Content creation (audio / video)	86%	14%				
Digital textbook	71%	29%				
Access to new software (upgrades)	71%	29%				
App downloads	57%	43%				
Record student responses (flash poll, clicker function)	43%	14%	29%			14%
Text to speech	43%	43%	14%			
Speech to text	43%	43%	14%			
Access flash-based web content	43%	14%	14%	29%		
Printing of assignments and materials from device to printers	29%	14%	29%	29%		
Memory / hard drive capacity	29%	29%	29%	14%		
Pen Enablement	29%	57%				14%



One to One Governance Policy Decision Points

- Staff to flesh out and post on the task force website
- Survey- uploaded and being distributed to stakeholder groups (8/16)
- Matt is researching points of inquiry to present at Sept. Task Force mtg
- Matt identify potential sites for visitation and protocol for interviews

	Policy Area	State Policy?	Guidance for local policy development?	Collaboration with other subcommittees / experts
1.	Establishment of local Technology Advisory Councils	No state policy	Recommendations for LEAs to create local councils include the scope and composition, (flesh out some guidance), establish minimum requirements for parent orientation content, recommendation to include students and parents in Technology Advisory Councils	Maine examples? Parent involvement overlap with other areas?
2.	Standardization	State-level procurement (finite options based on vendor solution)		Discuss with Schoolnet Subcommittee for standardized assessments- other policy coming out of the Schoolnet Subcommittee related to standardization?
3.	Centralization of hardware	<ul style="list-style-type: none"> • State selects the hardware but allows exceptions / substitutions (e.g., school for the blind). 		Procurement Subcommittee- flexibility of device (and add-ons) for

		<ul style="list-style-type: none"> • See asset management language below • Single device is the vision of procurement committee 		accessibility? Idaho will use Maine's language
4.	Centralization of software	<ul style="list-style-type: none"> • State sets minimum and districts are allowed to add • Draft guidance related to minimum functionality. • Define minimum (e.g., word processing, graphic, spreadsheets)- "productivity suite" (pg 23 in background reading from ME RFP) • Guidelines and procedures related to supporting additional, non-standard software that impacts OS 	LEA's provided discretion to add software, develop guidelines regarding modification and support- any software additions (purchase, support, licensing, etc...) beyond minimum requirements are the responsibility of the LEA.	Procurement Subcommittee- base software to meet functional requirements stemming from instructional use, check with Instructional Integration Subcommittee
5.	Centralization of PD			Classroom Technology Integration Subcommittee will determine this area
6.	Centralization digital content	State policy regarding adoption of Schoolnet and implications for districts that don't adopt		Schoolnet Subcommittee
7.	Centralization assessment	State policy to be developed by Schoolnet Subcommittee		Schoolnet Subcommittee- seek policy language
8.	Centralization technical support	State policy, tech support is part of the vendor bid offering.	Districts are responsible for support for any hardware or software above/beyond standard solution	Procurement Subcommittee- RFP, part of vendor proposal
9.	Protocol for hardware inventory updates	See Canby policy regarding annually with current technology update, language in RFP about evolution of hardware, establish cycle as part of the RFP, (e.g., hardware cycle refresh- 4 years?) compatibility issues -sub-point D- Canby		Procurement Subcommittee
10	Establish policy/ expectations for anti-virus and personal firewall	<ul style="list-style-type: none"> • Included as one of the software elements to be included in RFP (pg 54 of 		Procurement Subcommittee

	software	reading packet) <ul style="list-style-type: none"> Federal law and state statute currently address this issue 		
11	Establish policy/ expectations filtering	<ul style="list-style-type: none"> Abide by state (I.C. 33-131) and federal (Children's Internet Protection Act-CIPA) filtering requirements and develop references / guidance for these areas Develop policy related to appropriate usage training 		Procurement Subcommittee
12	Establish policy/ expectations for client management	Request- part of the RFP, each district would need to adopt what the vendor provides. It will be provided as part of the device		Procurement Subcommittee
13	Develop inventory tracking system	Examine ME's asset management system Adopt ME's system and customize for ID, set policy from state level Work with ME and utilize their system, not part of the RFP		Maine SDE
14	component checklists (i.e., external equipment)	Asset management system should have ability to manage	LEA's responsible for managing components	
15	Imaging cycle- restore to base	Minimum software set/load managed and provided with standard package, State work with vendor to create, distribute and manage ability to image the device easily- part of RFP		Procurement Subcommittee
16	Establish procedures for device assignments to students	See ME system, build on existing ID unique id system. State establish a policy regarding device distribution and assignment system		Procurement Subcommittee
17	Establish procedures for device assignments to districts	See #16		Procurement Subcommittee
18	Establish roll-out process (standardized or customized based on size?)	See ME system, examine regional distribution center structure, part of RFP?		Procurement Subcommittee
19	Software oversight /	State oversight and support for	LEA's may add on but	Procurement

	restrictions	basic package, vendor to outline as part of RFP response	responsible for determining compatibility and support	Subcommittee
20	Supplementing basic solution with additional hardware	See above	LEA responsibility to purchase	Procurement
21	Purchasing of additional devices (Districts, employees, families)	State policy-encourage option for additional purchasing, structure to avoid competition with traditional market Page 25, 3.3.5 from Maine		Procurement Subcommittee
22	Device ownership	<ul style="list-style-type: none"> Establish policy about ownership, when does it transfer from state to district and can district transfer ownership to a student? Establish lifecycle of devices RFP structured to allow for zero value at end of four years If device has a value (e.g., \$100+) establish guidance regarding disposal through state surplus 		Procurement Subcommittee
23	Disposal of devices after four-year cycle	<ul style="list-style-type: none"> First provide a mechanism for student to purchase for nominal fee (e.g., \$5 - \$10) Second create pool for local districts 		
24	Security related to disposal (i.e., clear hard drive)	State establish policy about who is responsible for wiping hard drive Add language to RFP about "end of life" Seek guidance from ME		Procurement Subcommittee
25	Security	Establish acceptable use policy including privacy statement limiting state liability for personal use of devices (e.g., purchases from Amazon.		
26	Mobile device warranty expectations	RFP to provide basic warranty for mechanical issues		Procurement Subcommittee
27	Mobile device insurance	State to provide guidance	<ul style="list-style-type: none"> LEAs to decide whether 	Procurement

	expectations	regarding insurance options RFP- separate break-out of insurance options to leverage state economies of scale with vendors, voluntary participation by districts	to offer/require additional accidental damage insurance • Connect insurance to ability to take device home	Subcommittee
28	Accessibility	Establish policy for waivers from standard device should a student's IEP or disability require a special device feature RFP to include accessibility options (e.g., universal design standards)		Procurement
29	Parent involvement / community outreach	<ul style="list-style-type: none"> • Develop policy language reflecting critical role of parents • Require parent orientation prior to laptops going home (see ME training agenda) • State to develop basic orientation template for districts/schools to customize • Establish minimum to be covered in orientation and training (PD part of RFP to include development of parent orientation) 	District required to offer orientation	Professional development related to training for parents
30	Technology support	<ul style="list-style-type: none"> • Establish standard for support/repair (e.g., Maine's policy regarding 5 minutes and then re-image) • Establish process for return and repair of machine • State guidance regarding encouraging student support capabilities as part of their instructional program 	Establish back-up policies- acceptable use policies, personal data on a machine are never the responsibility of the district	Procurement Subcommittee
31	Wireless access / security (open or closed)	<ul style="list-style-type: none"> • Encourage districts to maintain secure systems that are available 24-7 to all with passwords. • Not a 24-7 guarantee 	LEAs to have discretion about whether to operate open system (e.g., not password protected)	Procurement Subcommittee, Idaho Education Network

		<ul style="list-style-type: none"> • Policy requirements about open networks and filtering (e.g., youtube videos draining bandwidth) • Filtering part of the RFP 		
32	Local building readiness (hard-wire, wireless, hot-spots, electricity- charging stations)	<ul style="list-style-type: none"> • RFP dealing with wireless will address • LEA's required to provide minimum building readiness to support the 1:1 initiative • Establish a specification for wireless infrastructure • Establish a specification for support of the device (e.g., charging options) • Get definition of "minimum readiness" from Maine • Look into fall 2011 funds for infrastructure • Establish infrastructure "hardship" pool for handful of districts that can't afford to build the infrastructure (very rural districts in old buildings) • Examine building standards, are their infrastructure minimum. 		Division of Building Safety, Procurement Subcommittee
33	Power supply safeguards	<ul style="list-style-type: none"> • Policy recommendations related to back ups should power go out. • Servers • RFP 		Procurement Subcommittee
34	Patching / upgrading process			Procurement Subcommittee
35	Back-end servers and storage			Procurement Subcommittee
36	Anti-theft measures			Procurement Subcommittee
37	Configure classroom furniture to facilitate use of mobile devices and collaboration			Procurement Subcommittee
38	Teacher-student communication			

39	Personal (from home) computing devices in classroom			
40	Parental use of device			
41	Take home device			
42	Personalization (music, pix, apps)			
43	Search and seizure			
44	Parental notification			
45	Weblog			
46	Other Acceptable Use issues?			

General questions from the Procurement Subcommittee:

- 1) Are we purchasing devices or a managed service?
- 2) What procurement instrument will we use? RFP, RFI, existing contracts or a combination.
- 3) What is the duration of the vendor contract? What are the renewal options?
- 4) Will computers be required to go home at night or will schools have to upgrade infrastructure?
- 5) What is an acceptable level of down-time?
- 6) What is an acceptable level of customer service support and how will it be measured?
- 7) What are the instructional goals for the 1 to 1 devices and what software is needed to achieve them?
- 8) Will devices need to be Virtualized?
- 9) Will client management, anti-virus and firewall software be a part of the procurement? If so, at what level of standardization?
- 10) What is the timeline for specification development, the procurement process and ultimate deployment?