

## **EDU2011 Application**

Requested funding: \$177,887

Submitted on behalf of:

Clay Hill Elementary School  
6345 County Road 218  
Jacksonville, Florida 32234  
[www.clay.k12.fl.us/che](http://www.clay.k12.fl.us/che)

Contact Information:

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Clay Hill Elementary is a public school that is part of the School District of Clay County and is located at 6345 County Road 218 in Jacksonville, Florida. Though the school borders Duval County, its rural location has been identified by Internet providers as nonsufficient to support network expansion to the area. The school has approximately 68 staff members and serves approximately 520 students in grades K – 6.

Clay Hill Elementary is designated as a Title I school and also serves many special populations. On the 2010 Florida Comprehensive Assessment Test, only 39% students in grades 3-6 scored at Level 3 in Reading. The same group had only 36% who scored a Level 3 on the 2010 FCAT math test achieving proficiency. The Clay Hill Wireless Project will increase these percentages significantly. In California, after a six week trial working with students on wireless devices, students' reading fluency increased at six times the rate considered normal for that period of time. After six months, students gained almost two years of reading comprehension. Research from similar initiatives also document student gains based on student achievement data. To document Program outcomes and achievement of Program objectives, state and district reading and math achievement data, network usage data, attendance and behavior data will be analyzed.

The School District of Clay County has recognized the responsibility and the challenges of transforming learning and teaching environments to meet the needs of 21<sup>st</sup> Century learners. Connectivity to high speed Internet is vital to this transformation and there are two Wireless pilot programs in progress to map the direction the District must follow. The two pilots include a Leveraging Technology Initiative that is a movement toward 1:1 computing by allowing students to bring their own devices on campus, and Digital Equity Initiative that addresses devices for low income students. The pilots began spring of 2010 and include two schools, one junior high school, Green Cove Junior, and one high school, Oakleaf High School. Both pilots required the design and implementation of a wireless network that is accessible by all student devices that have Internet connectivity. This includes, but is not limited to, laptop computers, netbooks, iPads, iPod Touch, smartphones, and other similar devices.

As part of these pilots, Information Services has created a hybrid wireless environment that allows students to access the school district's filtered Internet connection. (Filtered access is a requirement of the Children's Internet Protection Act, CIPA.) This environment requires the district to invest more heavily in capacity, security, and bandwidth. Instructional Resources, Information Services and other Instructional Division departments have worked together to develop policies and procedures that allow students to bring and use their own technology.

If funded through EDU2011, the Leveraging Technology and Digital Equity pilots will be expanded to an outlying elementary, Clay Hill Elementary, that is located in an underserved community where no high speed Internet capabilities exist.

Technical issues that have been encountered in the design and implementation of the wireless network include authentication protocols, filtering requirements, and accessibility in all campus areas. Others are expected as the pilot expands but the authentication, filtering and accessibility have been addressed in the following ways:

- The "iClay" network requires Domain Authentication (network login), and will provide Internet Access only. No internal resources such as printers, servers, network shares, etc. will be available using this network. A generic guest account will be created in order to provide access to those that are not already assigned a district account.

- Traffic is routed through the iBoss Internet Filtering System to prevent access to inappropriate websites.
- Although limited in scope, the Clay Hill network will allow accessibility beyond the campus to enable after hour access thus breaking down barriers to learning.

Training for administrators, librarians, teachers and students has been critical to the success of the initiatives. A team composed of district and site-based personnel including Information Services, Instructional Resources, Technology Integration Specialists, site administrators, media specialists (librarians), and network specialists developed guidelines, informational documents, and training for all stakeholders including parents. The pilot at one school was integrated with a Title II D STEM initiative to correlate the curriculum impact when wireless access is an available factor.

Clay Hill Elementary has 68% of students eligible for free or reduced lunch and qualified as 80% under e-rate. Students are also at a disadvantage because no Internet service provider offers high-speed Internet in the Clay Hill area. Students cannot access many resources including textbooks, online databases, and other electronic resources because dial-up access has limited capabilities. Parents cannot connect to School District resources that are accessible to parents living in other areas of the district. Availability of wireless access to students off the school premises will require an extended coverage area of the campus wireless as well as authentication that limits access to Clay Hill students and families.

Though Clay Hill Elementary receives funding under Title I, neither the school nor the school district has a budget to address wireless for this community. Addendum I itemizes a complete budget of items necessary to implement the Clay Hill Wireless Program. Teacher, librarian, and student/parent training costs will be funded by the district.

Currently there are no other current or planned Wireless Programs that meet the needs outlined above. ATT does offer a tunnel solution that is being investigated for hospital homebound students but the rate structure based on the number of users. That solution requires purchase of one \$40 device for each student and approximately \$10 per month per student.

The District Technology Plan serves as the guiding document for technology planning and includes information on the Leveraging Technology and Digital Equity Initiatives. This document is being submitted as a separate document.

If funded through EDU2011, the Clay Hill Elementary Wireless Program will allow only filtered access to the hybrid wireless environment. Users of the network are authenticated through login credentials and all have signed an Acceptable Use Policy which is titled, Conditions for Use of Telecommunications and Network. Users and parent(s) will also be required to sign a Protocol document prior to use of the network (Attachment 3).

Funding requested for the Clay Hill Elementary Wireless Program is \$177,887. Attachment I includes a detailed listing of items proposed to complete the project.

**Attachment # 1  
Budget**

<b>CHE</b>	<b>\$177,887</b>							
						43.00%		
<b>Model</b>	<b>Product</b>	<b>Description</b>	<b>Quantity</b>	<b>List Price</b>	<b>Lead Time</b>	<b>Discount</b>	<b>Total Discounted Price</b>	
Catalyst 4503	WS-C4503-E	Cat4500 E-Series 3-Slot Chassis, fan, no ps	1	\$995	14 Days	43.00%	\$567.15	
	PWR-C45-1000AC	Catalyst 4500 1000W AC Power Supply (Data Only)	1	\$995	14 Days	43.00%	\$567.15	
	PWR-C45-1000AC/2	Catalyst 4500 1000W AC Power Supply Redundant(Data Only)	1	\$995	14 Days	43.00%	\$567.15	
	CAB-US515-C15-US	NEMA 5-15 to IEC-C15 8ft US	2	\$0	14 Days	43.00%	\$0.00	
	WS-X45-SUP6L-E	Catalyst 4500 E-Series Sup 6-E Lite, 2x10GE(X2) w/ Twin Gig	1	\$11,995	14 Days	43.00%	\$6,837.15	
	WS-X4448-GB-SFP	Catalyst 4500 48-Port 1000Base-X (SFPs Optional)	1	\$16,495	14 Days	43.00%	\$9,402.15	
	S45ELB-12252XO	Cisco CAT4500E IOS LAN BASE W/O CRYPTO	1	\$0	14 Days	43.00%	\$0.00	
		Unit List Price		\$31,475			<b>\$17,940.75</b>	\$17,940.75
	AIR-LAP1142N-A-K9	802.11a/g/n Fixed Unified AP; Int Ant; A Reg Domain	10	1,299.00		43.00%	\$7,404.30	
	AIR-PWR-CORD-NA	AIR Line Cord North America	10	0		43.00%	\$0.00	
	S114RK9W-12418JA	Cisco 1140 Series IOS WIRELESS LAN	10	\$0		43.00%	\$0.00	
	AIR-PWR-A	Pwr Sply In:100-240VAC Out:48VDC 380mA -1100, 1130AG, 1200	10	0		43.00%	\$0.00	
	WCS-APBASE-50	WCS-Standard-K9 50 APs. License Only.	1	\$3,995		43.00%	\$2,277.15	

	SP-SAU-WCSAB50	SP SAU WCS Base License for 50 APs	1	\$799		43.00%	\$455.43	
	AIR-CT50-1140A20	802.11a/g/n FCC Cfg; 5508-50; 20APs; WCS Demo	1	\$43,650		43.00%	\$24,880.50	
	AIR-CT5508-50-K9Z	5508 Series Controller for up to 50 APs	1	\$0		43.00%	\$0.00	
	CON-SNT-CT0850	SMARTNET 8X5XNBD 5508 Series Controll	1	\$1,800		31.00%	\$1,242.00	
		Unit List Price					<b>\$35,017.38</b>	\$35,017.38
Catalyst 3750-12S	WS-C3750G-12S-S	Catalyst 3750 12 SFP + IPB Image	1	\$7,995	14 Days	43.00%	\$4,557.15	
	CAB-STACK-50CM	Cisco StackWise 50CM Stacking Cable	1	\$250	14 Days	43.00%	\$142.50	
	CAB-AC	Power Cord,110V	1	\$0	14 Days	43.00%	\$0.00	
		Unit List Price		\$8,245			<b>\$4,699.65</b>	\$4,699.65
Catalyst 3750-24PS	WS-C3750-24PS-S	Catalyst 3750 24 10/100 PoE + 2 SFP + IPB Image	3	\$4,795	14 Days	43.00%	\$8,199.45	
	CAB-STACK-50CM	Cisco StackWise 50CM Stacking Cable	3	\$250	14 Days	43.00%	\$427.50	
	CAB-AC	Power Cord,110V	3	\$0	14 Days	43.00%	\$0.00	
		Unit List Price		\$5,045			<b>\$8,626.95</b>	\$8,626.95
Catalyst 3750-48PS	WS-C3750-48PS-S	Catalyst 3750 48 10/100 PoE + 4 SFP Standard Image	5	\$8,495	14 Days	43.00%	\$24,210.75	
	CAB-STACK-50CM	Cisco StackWise 50CM Stacking Cable	5	\$250	14 Days	43.00%	\$712.50	
	CAB-AC	Power Cord,110V	5	\$0	14 Days	43.00%	\$0.00	
		Unit List Price		\$8,745			<b>\$24,923.25</b>	\$24,923.25
GLC-SX-MM	GLC-SX-MM=	GE SFP, LC connector SX transceiver	59	\$500	14 Days	43.00%	\$16,815.00	
		Unit List Price		\$500			<b>\$16,815.00</b>	\$16,815.00
WS-C3750G-24WS-S50	WS-C3750G-24WS-S50	Catalyst3750G Integrated WLAN Controller for up to 50 APs	1	\$25,500		43.00%	\$14,535.00	
	AIR-PWR-CORD-NA	AIR Line Cord North America	1	\$0		43.00%	\$0.00	

	CAB-STACK-50CM	Cisco StackWise 50CM Stacking Cable	1	\$0		43.00%	\$0.00	
	SWLC4400K 9-52	WLAN Controller SW for 4400 - ED	1	\$0		43.00%	\$0.00	
	SWLC3750-50-K9	IP BASE W/O CRYPTO WITH WEB BASED DEV MGR	1	\$0		43.00%	\$0.00	
	SWLC4400K 9-52-ER	WLAN Controller Emergency SW for 4400 - ED	1	\$0		43.00%	\$0.00	
	CON-SNTE-3750GS50	SMARTNET 8X5X4 Cat 3750G Intgrtd Wireless LAN Cntrlr	1	\$2,958		31.00%	\$2,041.02	
		Unit List Price					<b>\$16,576.02</b>	\$16,576.02
								2
Catalyst 3750G-48P	WS-C3750G-48PS-S	Catalyst 3750 48 10/100/1000T PoE + 4 SFP + IPB Image	0	\$15,495	14 Days	43.00%	\$0.00	
	CAB-STACK-50CM	Cisco StackWise 50CM Stacking Cable	0	\$250	14 Days	43.00%	\$0.00	
	CAB-AC	Power Cord,110V	0	\$0	14 Days	43.00%	\$0.00	
		Unit List Price		\$15,745			<b>\$0.00</b>	\$0.00
Catalyst 3560-8PC	WS-C3560-8PC-S	Catalyst 3560 Compact 8 10/100 PoE + 1 T/SFP; IP Base Image	26	\$1,395	14 Days	43.00%	\$20,673.90	
	CAB-AC	Power Cord,110V	26	\$0	14 Days	43.00%	\$0.00	
		Unit List Price		\$1,395			<b>\$20,673.90</b>	\$20,673.90
								0
Cisco 3825 Router	CISCO3825-V/K9	3825 Voice Bundle,PVDM2-64,SP Serv,64F/256D	1	10,495.00	14 Days	43.00%	\$5,982.15	
	S382RSPSK9-12423	Cisco 3825 SPSK9-SPSK9 FEAT SET FACTORY UPG FOR BUNDLES	1	0	14 Days	43.00%	\$0.00	
	VWIC2-2MFT-T1/E1	2-Port RJ-48 Multiflex Voice/WAN Trunk - T1/E1	1	2,000.00	14 Days	43.00%	\$1,140.00	
	AIM-CUE	Unity Express AIM -price includes 12 mailbox	1	1,795.00	14 Days	43.00%	\$1,023.15	
	SCUE-AIM-7.0-K9	Cisco Unity Express base release - 7.0	1	0	14 Days	43.00%	\$0.00	
	SCUE-LIC-12CCM	Unity Express License 12 Voice Mailbox-Auto	1	0	14 Days	43.00%	\$0.00	



### Clay Digital Equity Initiative

The School District of Clay County ***Digital Equity Initiative*** serves the neediest students by providing technology and training to students and their families. Students in families that qualify for free lunch programs may apply to receive computers or another digital device through the *Digital Equity Initiative (DEI)*. As computers are refurbished and become available, families selected through a lottery system, will be able to purchase a computer another digital device for a nominal \$25 fee. Computers will be furnished with a standard package and supplied through community donations and district surplus computers. Students in the SDCC Career and Technical Education program will be responsible for refurbishing the computers as part of their Computing Technology Industry Association (CompTIA) work. Computers will be warranted for 30 days. Miscellaneous expenses are funded through donation and/or grant sources only.

In order to receive the computer or another digital device, the student and a parent, guardian, or adult family member must attend a two-hour training session after selection through the lottery. At the training, the students learn with their families how to connect to the Internet and how to access and use District resources.

### Leveraging Technology Initiative

The School District of Clay County's ***Leveraging Technology Initiative*** develops a movement toward 1:1 computing. Though the District is unable to fund a 1:1 student computer ratio, allowing students to bring their own devices places the District in a better position to provide for students who do not already have access to digital devices. These devices may include laptops, cell phones, iTouch, Netbooks, or other such wireless technology devices that have sufficient capabilities to utilize district wide instructional resources.

The school district will continue to provide computers for students to use during the school day, and a ***Digital Equity Initiative*** will serve the neediest students by providing technology and training to students and their families.

The *Leveraging Technology Initiative (LTI)* will begin with pilots at Green Cove Junior High and Oakleaf High School. During these pilots, Information Services will create a hybrid wireless environment that allows students to access the school district's filtered Internet connection. (Filtered access is a requirement of the Children's Internet Protection Act, CIPA.) This environment will require the district to invest more heavily in capacity, security, and bandwidth. Instructional Support Services will work with Information Services and other Instructional Division departments to develop policies and procedures that allow students to bring and use their own technology.

## Protocol Document

### Protocol for the use of electronic devices on campus

These are the electronic device protocols adopted by Clay Hill Elementary. These protocols will be updated and changed as necessary. For the most recent updates please check our website at <http://www.clay.k12.fl.us/che>.

The use of an electronic device to provide educational material to a student is not a necessity but a privilege. A student does not have *the right* to use his or her laptop, cell phone or other electronic device while at school. When abused, privileges will be taken away. When respected they will benefit the learning environment as a whole.

1. The term *media* will be used in this document to signify any single medium used to communicate any data for any purpose. Example: digital photos, recorded audio, digital or analog video.
2. The term *device* is used to cover all electronic devices that can transmit digital media.

#### Internet

Only the Internet gateway provided by the school may be accessed while on campus. There are no assurances made by the School District of Clay County as to the speed or quality and availability of the network. Personal Internet connective devices such as, but not limited to, cell phones/cell network adapters are not permitted to be used by students to access outside Internet connections. CHE students also have access to the network after school hours.

#### Privileges

Any student who has an approved laptop or electronic device:

- May use it as directed by the classroom teacher in his/her classroom.
- With the approval of the classroom teacher, may use it in class in place of a textbook that is available online or in a digitally accessible format.
- May **not** use the camera function of any electronic device unless directed by the classroom teacher in his/her classroom.
- Must place digital devices under the desk or in some other location specified by the classroom teacher.
- Only the student on this form is approved for this device.

Any student who has an approved laptop or electronic device shall not have any expectation of privacy for any communications or information of any kind or nature whatsoever which is maintained or stored on said laptop or device. The school has no responsibility to provide operating power for student devices. All devices must have an antivirus software installed to be approved. The school will not provide this software for your device.

#### Security

Responsibility to keep the device secure rests with the individual owner. There will always be an inherent risk of theft while at school. Clay Hill Elementary is not liable for any device which is stolen while on campus. The school will provide you with the ability to keep your devices secure, but it is the responsibility of the owner of the device to use these places. If a device is stolen, the situation will be handled through the discipline office just as any other personal artifact that is stolen in school. Many devices look identical. It is recommended that skins (decals) and other custom touches that meet requirements of the Student Code of Conduct be used to physically distinguish your device from others. Lockers are available and it is strongly suggested that students use them to store electronic devices in accordance with their schedule in order to avoid theft while involved in physical education classes or any situation where a student will not be in contact with their belongings.

Do not take a laptop or digital device to PE classes.

## Violations of trust

Below is a list of violations that may result in the termination of the privilege to use any or all electronic devices at school.

- Any media that is deemed inappropriate as defined in the Student Code of Conduct shall not be accessed while on campus. For example: If you cannot wear it on a shirt, you are not allowed to display it or access it on your device.
- The use of electronic devices to cheat on assignments or tests.
- The use of electronic devices and media to bully, threaten, harass or abuse another person.
- The use of electronic devices to record, in any media format, another person without their knowledge.
- Other discipline issues may result in the loss of EDP (electronic device privilege). For example: Stealing, cyberbullying.
- Sexting (the act of transmitting nude photos and/or provocative text) in any form is strictly forbidden.
- Other

## Personnel

- School and District Staff including Technical and Media Specialists will not check or troubleshoot student devices.
- School and District Staff including Network and Media Specialists will not investigate student laptop or device issues, i.e., content, history files, cache, etc.
- The Media Specialists will only answer inquiries about adding additional devices during scheduled days/times identified by the Media Center.
- While students do not have any expectation of privacy as to the content of information on electronic devices carried onto school campuses, School and District personnel do not have the right to search digital content on student personal devices unless there is reasonable suspicion. School and District personnel may power on the phone to determine ownership when a phone is found but may only view screen displayed when the device is powered on unless there is reasonable suspicion. Law enforcement officials will search any digital content if deemed necessary.
- School and District personnel may confiscate a digital device if there is any suspicion concerning the use of an electronic device to violate school rules or to participate in potential criminal activity.
- When a digital device is confiscated, the student will be directed to turn off the device and hand it to the requesting School or District personnel. It will be placed in a sealed envelope with the date, student's name, phone number, note of violation, and signature of confiscating personnel.
- The device will be transported to the office and the student may be issued a referral. School administrators will determine the level of the offense.
- The parent or legal guardian will be notified within 72 hours and the device will only be released to a parent or legal guardian after 3 days from the date of the offense at a time specified by the school administrator.
- The parent or legal guardian will be asked to open the envelope with the device, record the date and time when it is received, and sign the envelope, after which the envelope will be retained by the school. The parent or legal guardian may be asked to show proper identification
- If there is suspicion of potential criminal activity, the device may be turned over to law enforcement officials.

**Student Access**

- Students will access a splash page for login to the system when the Internet browser is launched. Access will be controlled by the Student Active Directory Account.
- Students are not authorized to connect to the wired network with personally owned laptops. If a student fails to follow this policy his/her electronic device privileges will be revoked for the remainder of the school year and the student's account will not be authorized access to student wireless network.
- SDCC has the right to limit students to the SDCC pilot network.

**I have read the Protocol for the use of electronic devices on campus and understand that this is a privilege that if abused will be taken away.**

Device Serial #: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

*Student Signature*

\_\_\_\_\_

*Student Name (Printed)*

\_\_\_\_\_

*Parent Signature*

<p><u>Office Use Only</u></p> <p>_____</p>
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**Attachment #4**

**District Technology Plan**

**Submitted as separate document**