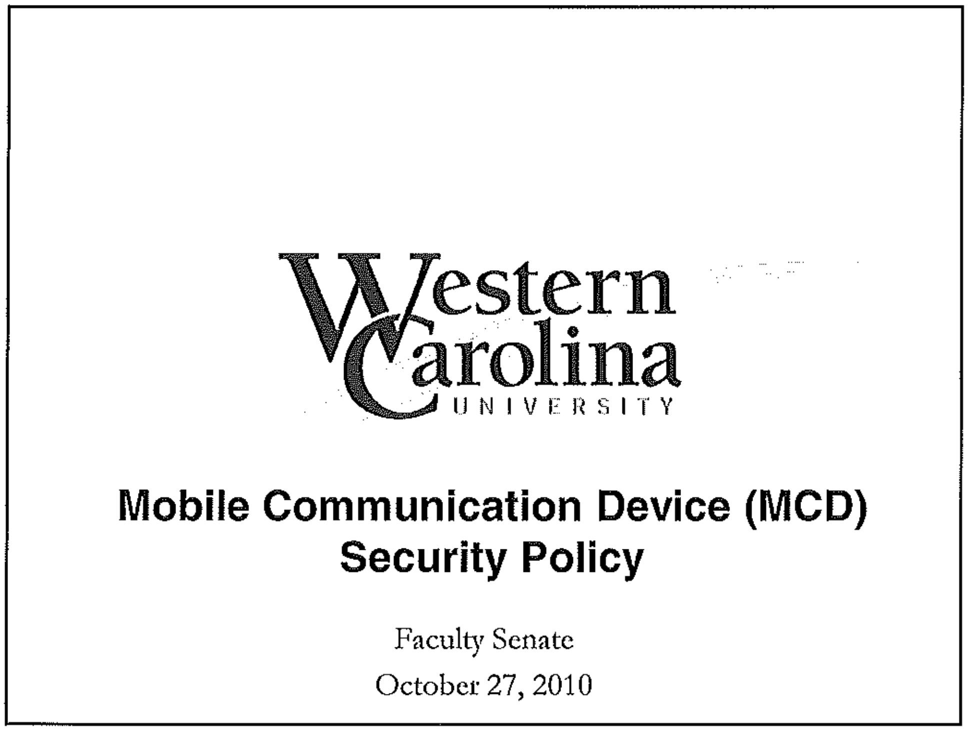
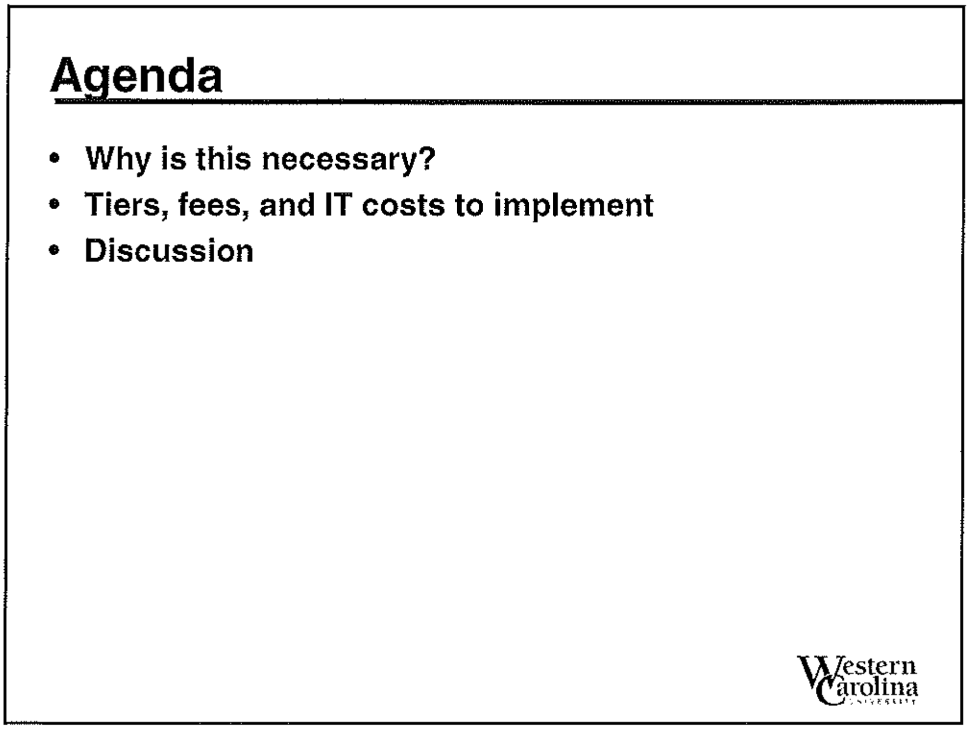


Mobile Communication Device (MCD) Security Policy

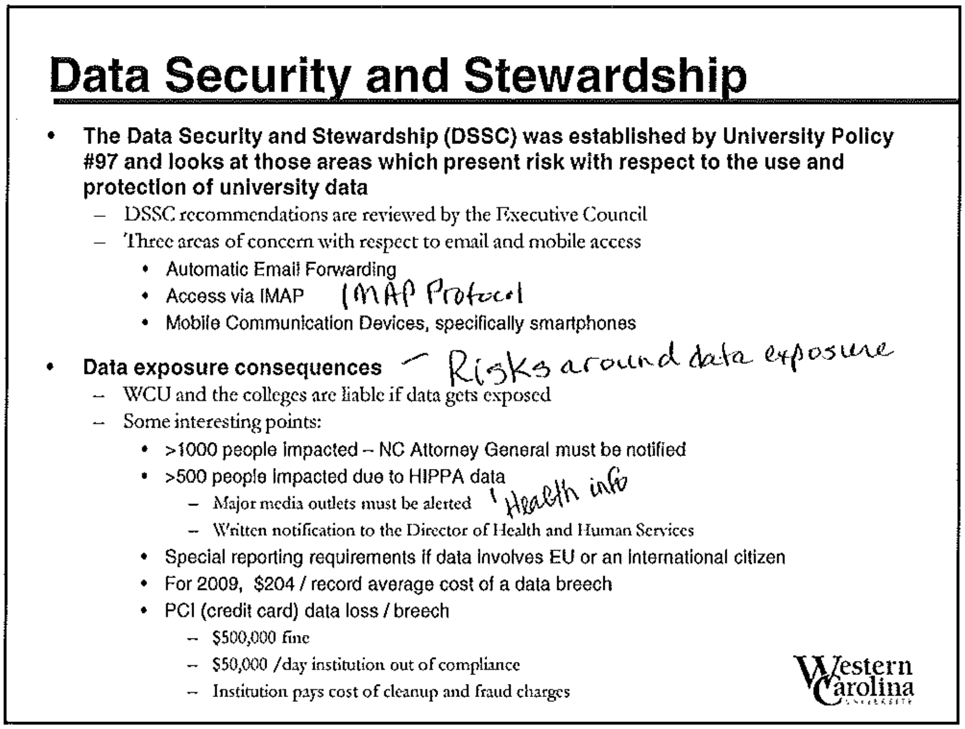
Faculty Senate

October 27, 2010



Agenda

- Why is this necessary?
- Tiers, fees, and IT costs to implement
- Discussion



Data Security and Stewardship

- **The Data Security and Stewardship (DSSC) was established by University Policy #97 and looks at those areas which present risk with respect to the use and protection of university data**
  - DSSC recommendations are reviewed by the Executive Council
  - Three areas of concern with respect to email and mobile access
    - Automatic Email Forwarding
    - Access via IMAP IMAP Protocol
    - Mobile Communication Devices, specifically smartphones
- **Data exposure consequences** – Risks around data exposure
  - WCU and the colleges are liable if data gets exposed
  - Some interesting points:
    - >1000 people impacted – NC Attorney General must be notified
    - >500 people impacted due to HIPPA data
      - Major media outlets must be alerted 'Health info
      - Written notification to the Director of Health and Human Services
    - Special reporting requirements if data involves EU or an international citizen
    - For 2009, $204 / record average cost of a data breech
    - PCI (credit card) data loss / breech
      - $500,000 fine
      - $50,000 /day institution out of compliance
      - Institution pays cost of cleanup and fraud charges

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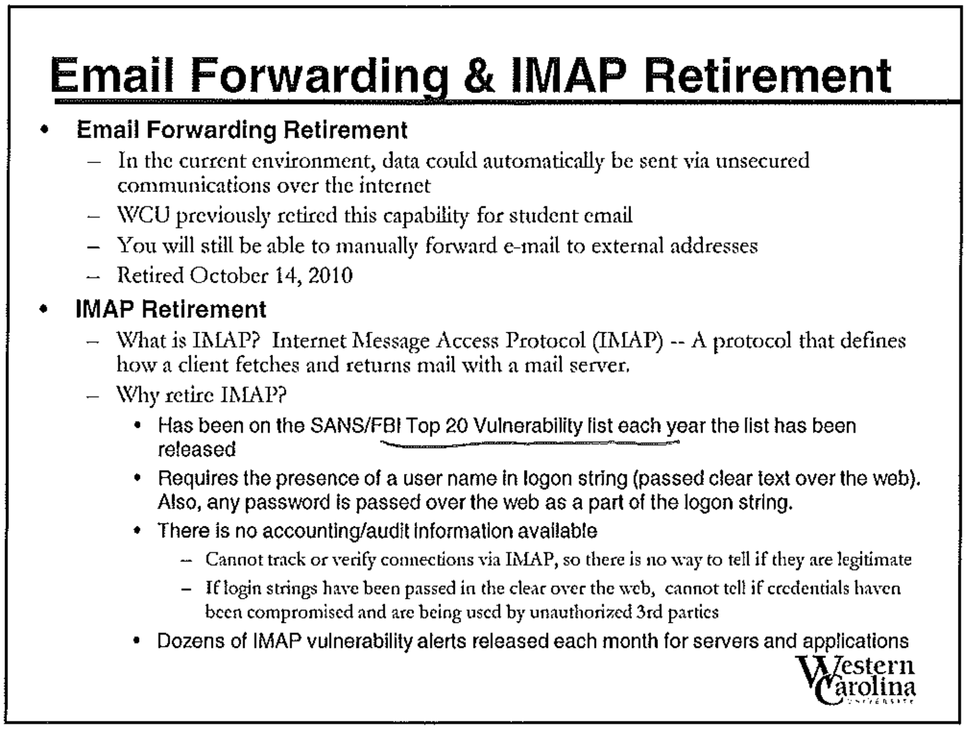

Email Forwarding & IMAP Retirement

- **Email Forwarding Retirement**
  - In the current environment, data could automatically be sent via unsecured communications over the internet
  - WCU previously retired this capability for student email
  - You will still be able to manually forward e-mail to external addresses
  - Retired October 14, 2010
- **IMAP Retirement**
  - What is IMAP? Internet Message Access Protocol (IMAP) -- A protocol that defines how a client fetches and returns mail with a mail server.
  - Why retire IMAP?
    - Has been on the SANS/FBI Top 20 Vulnerability list each year the list has been released
    - Requires the presence of a user name in logon string (passed clear text over the web). Also, any password is passed over the web as a part of the logon string.
    - There is no accounting/audit information available
      - Cannot track or verify connections via IMAP, so there is no way to tell if they are legitimate
      - If login strings have been passed in the clear over the web, cannot tell if credentials haven been compromised and are being used by unauthorized 3rd parties
    - Dozens of IMAP vulnerability alerts released each month for servers and applications

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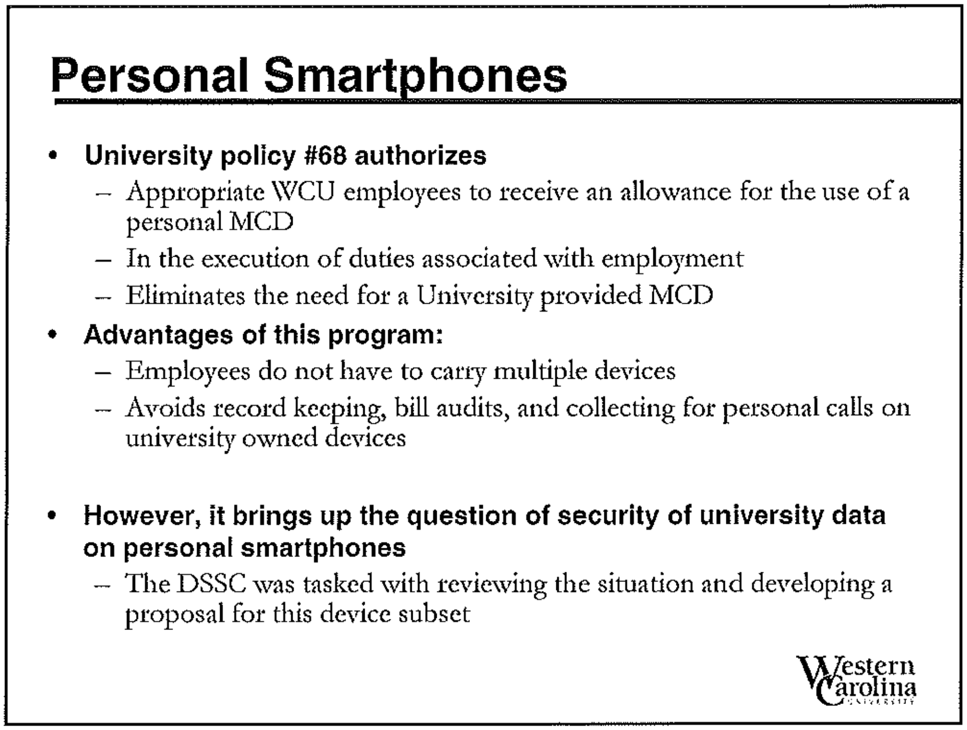

Personal Smartphones

- **University policy #68 authorizes**
  - Appropriate WCU employees to receive an allowance for the use of a personal MCD
  - In the execution of duties associated with employment
  - Eliminates the need for a University provided MCD
- **Advantages of this program:**
  - Employees do not have to carry multiple devices
  - Avoids record keeping, bill audits, and collecting for personal calls on university owned devices
- **However, it brings up the question of security of university data on personal smartphones**
  - The DSSC was tasked with reviewing the situation and developing a proposal for this device subset

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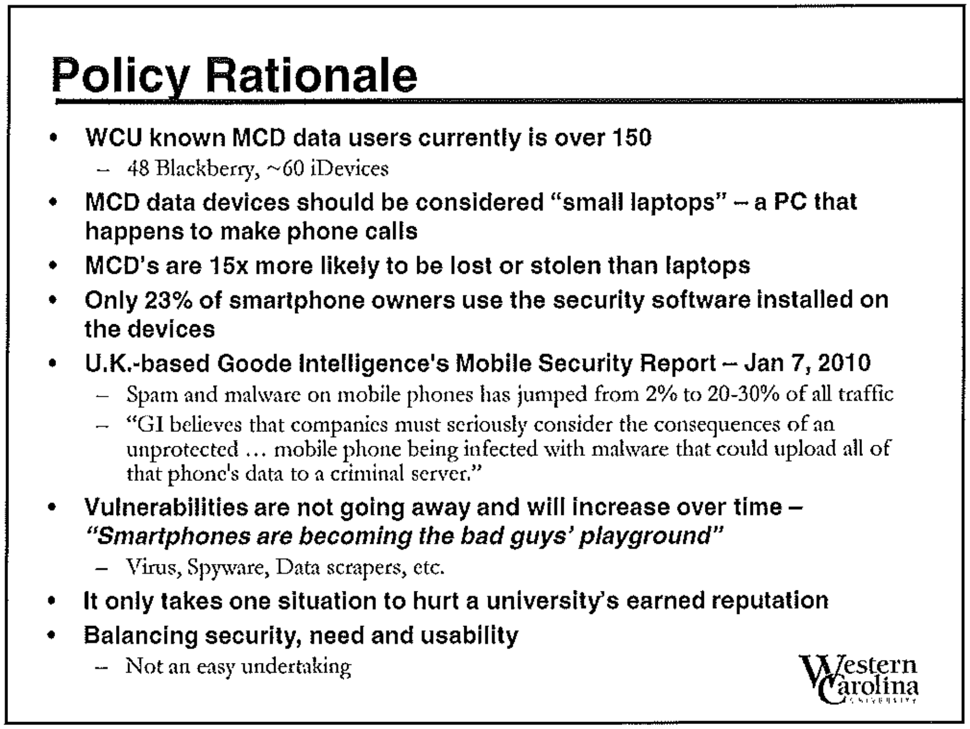

Policy Rationale

- **WCU known MCD data users currently is over 150**
  - 48 Blackberry, ~60 iDevices
- **MCD data devices should be considered "small laptops" – a PC that happens to make phone calls**
- **MCD's are 15x more likely to be lost or stolen than laptops**
- **Only 23% of smartphone owners use the security software installed on the devices**
- **U.K.-based Goode Intelligence's Mobile Security Report – Jan 7, 2010**
  - Spam and malware on mobile phones has jumped from 2% to 20-30% of all traffic
  - "GI believes that companies must seriously consider the consequences of an unprotected ... mobile phone being infected with malware that could upload all of that phone's data to a criminal server."
- **Vulnerabilities are not going away and will increase over time – *"Smartphones are becoming the bad guys' playground"***
  - Virus, Spyware, Data scrapers, etc.
- **It only takes one situation to hurt a university's earned reputation**
- **Balancing security, need and usability**
  - Not an easy undertaking

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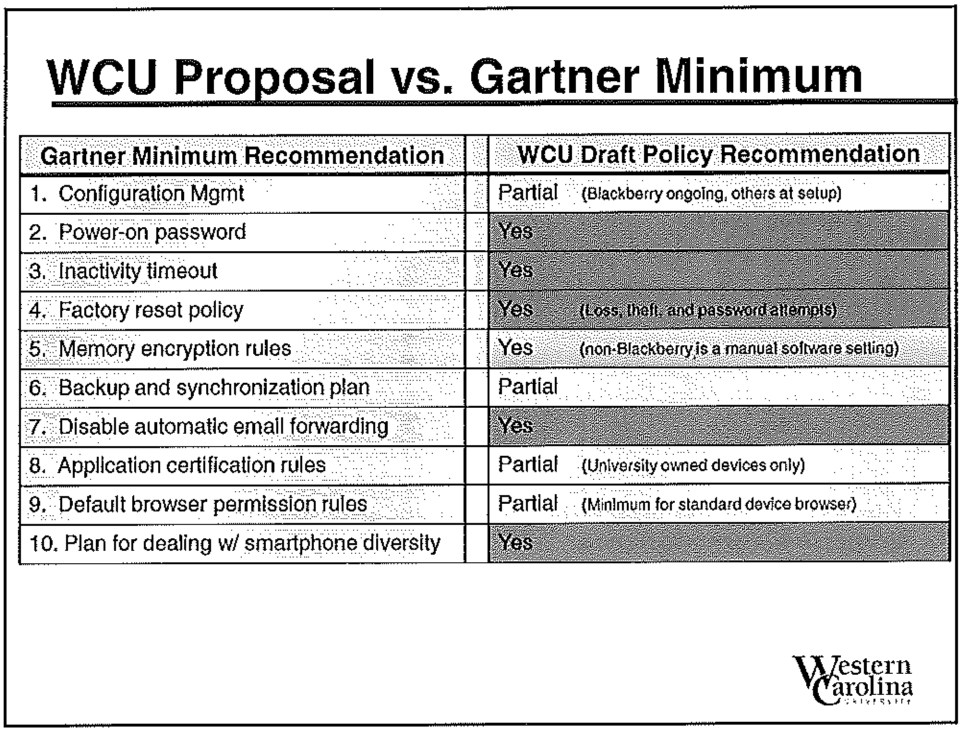
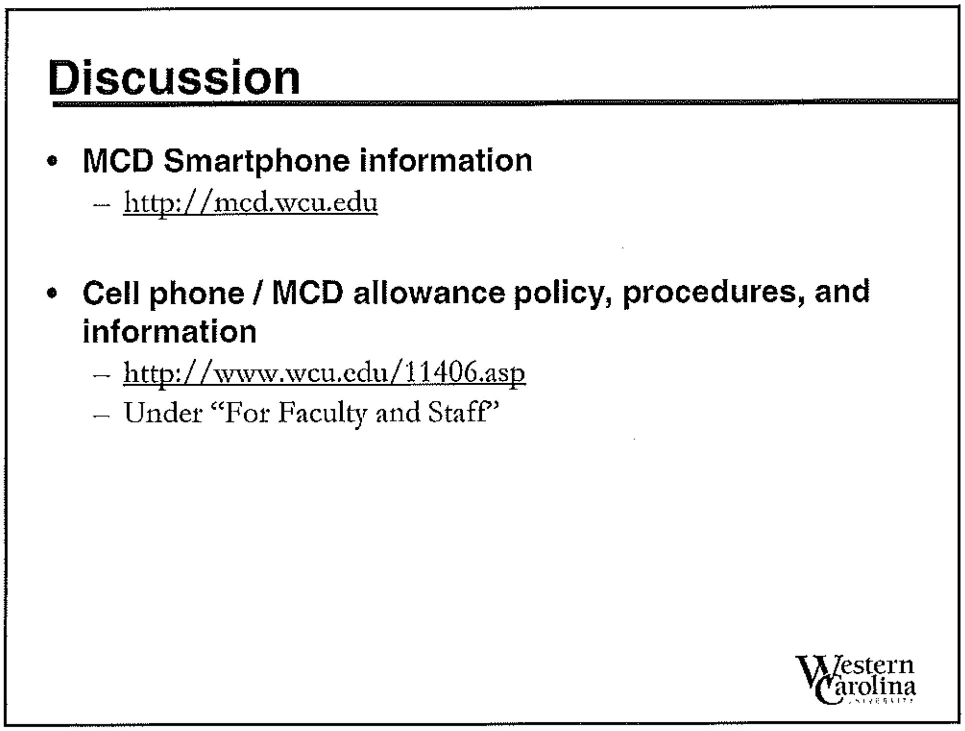


WCU Proposal vs. Gartner Minimum

Gartner Minimum Recommendation	WCU Draft Policy Recommendation
1. Configuration Mgmt	Partial (Blackberry ongoing, others at setup)
2. Power-on password	Yes
3. Inactivity timeout	Yes
4. Factory reset policy	Yes (Loss, theft, and password attempts)
5. Memory encryption rules	Yes (non-Blackberry is a manual software setting)
6. Backup and synchronization plan	Partial
7. Disable automatic email forwarding	Yes
8. Application certification rules	Partial (University owned devices only)
9. Default browser permission rules	Partial (Minimum for standard device browser)
10. Plan for dealing w/ smartphone diversity	Yes



Discussion

- **MCD Smartphone information**
  - http://mcd.wcu.edu
- **Cell phone / MCD allowance policy, procedures, and information**
  - http://www.wcu.edu/11406.asp
  - Under "For Faculty and Staff"

3 Tiers

		Tier 1	Tier 2	Tier 3
Email Service		← **WCU *pushes* email to device** →		**Person *pulls* email**
Primary Need		Business need to access and/or locally store PII or campus sensitive data	Access email, calendar, and contacts for productivity and/or personal convenience	For users who do not need email pushed to a device
Device		Blackberry	*Non-Blackberry* that supports Active Sync 4.5+	Any device with a good web browser
Connection Method		BES with encryption	Active Sync 4.5+	Outlook Web Access email.wcu.edu
Licenses required		BES license	None	None
Email attachments		Yes	No	Viewable
Storage of PII / sensitive data		Yes	No per policy #97	No per policy #97
Policies pushed to device All req. passwords		– Password required (min 6 char with 1 special char – 12345!) – Idle device lock after 15 minutes – Factory reset after 10 failed attempts – Full device encryption – Desktop syncing disabled	– Password required (min 5 char with 1 non-numeric – 1234a) – Idle device lock after 15 minutes – Factory reset after 5 failed attempts – Encrypt device as strongly as possible (manual on iDevices)	– No policies pushed to device – Same policies as remotely logging in from a shared device
Costs		Initial – first year – No setup fee – $110 BES license fee charged by vendor – $ 35 BES maint fee Annual ongoing ($35) – $ 35 BES maint fee	Initial – first year – $ 35 setup fee ~~– $ 50 maint fee~~ **Waived for FY10-11** Annual ongoing ($50) – $ 50 maint fee	None

How are the fees used?

MCD Costs

		Costs ($)	Hours		Account Fee per year		Anticipated Revenue	
Blackberry								
BES Server		$4,242						
BES Licenses		$110			$110 one time at setup for license		None	Vendor cost
BES License Maintenance		$35			$35		None	Vendor cost annually
BES Server Hosting		$3,926						
BES Server Maint		$625						
Active Sync								
Implmentation	Helpdesk person 6mo	$25,000	1040		$35 one time setup	100 users	$3,500	One-time
	Others (2 @ 1day /wk)	$20,000	832		$50	100 users	$5,000	Annual
Helpdesk support	7 calls/wk @ $12	$4,368	130	@ 15 min per				
Keeping up with security issues and sw configurations	2 days / month	$4,615	192					
Purchase of Security Mgmt SW				Initial estimates of $45-50 per device (100@$50 = $5000)	FYI -- we are working hard to not have to go this route			
Mgmt SW maintenance				20% ($1000)				
Malware SW				Potential future need				
ActiveSync maint / security updates	3 days / yr	$577	24					
Device testing	5 days / yr	$962	40					
Web page updates	6/yr, 1day setup	$1,154	48					
	Total	$56,676	2306	Does not include BES ($8,793)				
	Recurring	$16,227	434	Does not include implementation. Includes BES server hosting/maint.				
Purchase of IPADS	5 @ $600	$3,000		IT has had to buy in order to support college purchases				
Factory Resets	Included in annual maintenance			VZ Total Equipment Coverage -- Mobile Recovery	$7.99 /mo			
				Apple Mobile Me	$99 /yr			

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