

## *"Going Paperless"* Mobile Device Management

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## Abstract

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- Initiative to assist the university community with digital content
- Investigate the possibility of using mobile devices for the digital content
- Managing these devices in both onsite and offsite scenario
- Provide Software as a Service (SaaS) capabilities
- Provide self-service infrastructure
- Expansion of the above services to wider university community

## About Griffith University

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- Established in 1971 and officially opened in 1975
- Griffith was formed by the amalgamation of several existing tertiary institutions
- We are home to about 40,000 students from all over the world
- Griffith offers more than 300 degrees including undergraduate degrees, postgraduate and research degrees
- 5 campuses: Gold Coast, Logan, Mt Gravatt, Nathan and South Bank
- More than 110,000 graduates from over 156 countries

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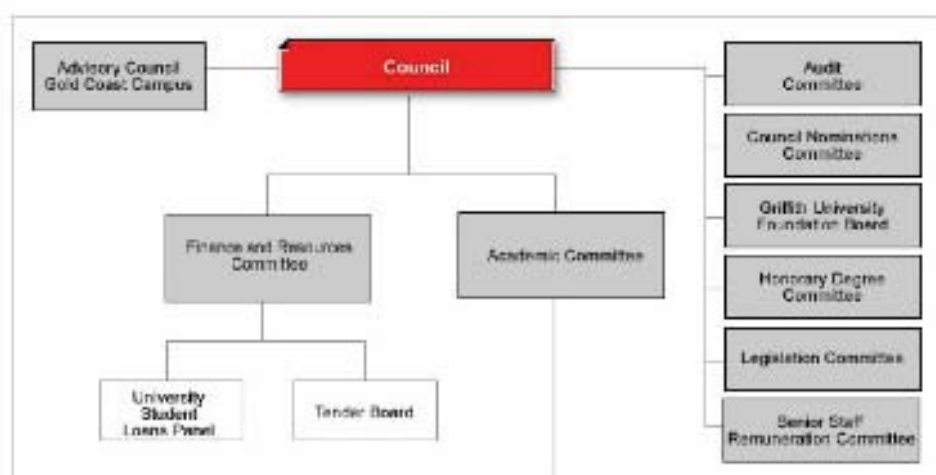
## Why did we start the project?

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### University Council

32 Members, including 2 elected students from both postgraduate and undergraduate level.

#### Council and its committees



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## Why did we start the project? Cont'd

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### Traditional Meeting

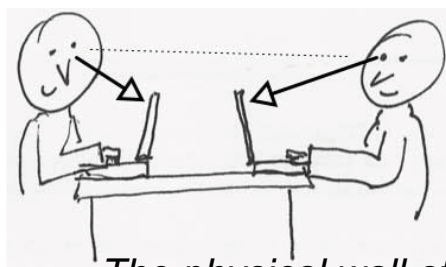
Thick printed booklets, forms, agenda

- Couriered to each of the council members
- Last minute updates difficult to distribute
- Poor portability
- Current documentation cumbersome
- Unable to cross reference within/across documents
- No ability to effectively search content
- Unable to easily look up historical documents
- Unable to distribute last minute support documents

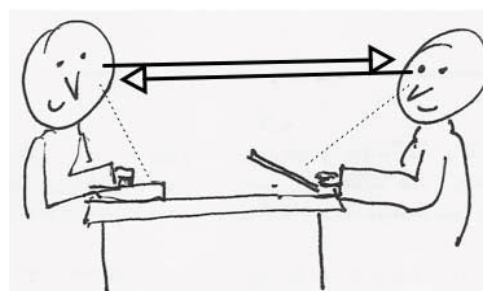
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## Tablets vs. Clamshell

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*The physical wall of flipped-up computer screens creates an artificial and dysfunctional social distance among and between members of the group.*



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## Fast Forward

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### **The iPad initiative for the University Council**

- Reviewed for long-term support
- Wider scope for all meetings

### **Savings**

- Paper consumption
- Re-distribution time of the documents
- Archive and collaboration

### **The scope**

- Expanded to difference devices and hardware
- Environment promoting mobile workforce

### **Ultrabooks**

- Merging with the line of tablet devices.

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## Investigation

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- What is the most suitable tool for managing our fleet?
- How do we manage access to applications ?
- How do we deliver the service to our community of staff and students?
- Should we provide more personal device access?
- Do we have adequate communications infrastructure to support application delivery to where ever the client wants it
- What is the strategic benefit / imperative to Griffith University to do something different.

## Strategic Benefits

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### **The support of mobile devices**

- Collaboration/Email in the cloud
- The functions now occurring on tablets become viable on these smaller devices.
- Remove labor intensity with a fleet management tool in place
- We still need to engage with our clients and work through the current management procedures.
- Guidance on the use of the public cloud (Gmail, GoogleDoc, DropBox, etc.) for our clients for Self-Servicing.

## Evaluation - Hardware

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### **Evaluation criteria:**

- |                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Size</li><li>• Cost</li><li>• Weight</li><li>• Security</li><li>• Warranty</li><li>• Supplier</li><li>• Build quality</li><li>• Upgradability</li><li>• Battery life</li></ul> | <ul style="list-style-type: none"><li>• Network<ul style="list-style-type: none"><li>• University wireless</li><li>• Bluetooth</li></ul></li><li>• Communication<ul style="list-style-type: none"><li>• Skype</li><li>• NEC Softphone</li><li>• IBM Sametime</li></ul></li></ul> | <ul style="list-style-type: none"><li>• Document retrieval</li><li>• Emails<ul style="list-style-type: none"><li>• Gmail</li><li>• Lotus Notes</li><li>• Exchange</li></ul></li></ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Evaluation – Hardware cont'd

### Mobile devices to view digital contents

#### Tablet form factor

Apple iOS devices

Android

Others (Windows Tablets,  
Ultrabooks, Macbook Air)



**Table 1**  
Worldwide Sales of Media Tablets to End Users by OS (Thousands of Units)

| OS                      | 2010          | 2011          | 2012           | 2013           |
|-------------------------|---------------|---------------|----------------|----------------|
| iOS                     | 14,766        | 47,964        | 68,670         | 138,497        |
| Market Share (%)        | 83.9          | 68.7          | 63.5           | 47.1           |
| Android                 | 2,502         | 13,898        | 26,382         | 113,457        |
| Market Share (%)        | 14.2          | 19.9          | 24.4           | 38.6           |
| MeeGo                   | 107           | 788           | 1,271          | 3,057          |
| Market Share (%)        | 0.6           | 1.1           | 1.2            | 1.0            |
| WebOS                   | 0             | 2,796         | 4,245          | 8,886          |
| Market Share (%)        | 0.0           | 4.0           | 3.9            | 3.0            |
| QNX                     | 0             | 3,901         | 7,134          | 29,496         |
| Market Share (%)        | 0.0           | 5.6           | 6.6            | 10.0           |
| Other Operating Systems | 234           | 432           | 510            | 700            |
| Market Share (%)        | 1.3           | 0.6           | 0.5            | 0.2            |
| <b>Total Market</b>     | <b>17,610</b> | <b>69,780</b> | <b>108,211</b> | <b>294,093</b> |

Source: Gartner (April 2011)

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## Supported services through MDM

### Services we want to provide:

- Packaging
- Software as a Service (SaaS)
- Perpetual License
- Role-based Administrator
- Standalone server
- Fail-over capability
- Web portal enrolment
- Active Directory integration
- WiFi configuration
- VPN
- Expiration of Profiles
- Push text message
- Remove passcode
- Remote lock
- Remote wipe

## Evaluation – Mobile Device Management Suite

- Absolute Manage
- Symantec Mobile Management
- Dell – KACE
- Altiris
- Airwatch
- McAfee Enterprise Mobility Management (McAfee EMM)
- Mobile Iron Multi-OS Management
- Zenprice

**Absolute**Software

TRACK. MANAGE. SECURE.

 **Symantec**. Confidence in a connected world.



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## Evaluation – Mobile Device Management Suite - Cont'd

### Audit

- Windows / Macintosh / Linux / iOS / Android
- Internal Reference Numbers
- Auditing without local clients
- Dual-boot / Virtualisation support
- Device Affiliation
- Reporting

### Imaging

- Imaging
- Deployment
- Driver Management
- Multi-cast images within / between different subnets
- User State Migration

### Software

- License Management
- Different installer types
- Install Rules
- Remove and redistribute packaged software

- Process orchestration
- Virtualised applications
- SaaS capability
- Software metering

### Mobile Devices

- Devices Management
- Auditing

### Remote Control

- Remote Control for Windows / Macintosh

### Miscellaneous

- Scalability (up to 15000 end points)
- WAN – multiple campuses
- Reporting
- Software and end-point hardware
- Pre-configured / adhoc
- Printer management
- Browser-based GUI
- Active Directory integration

- Integration of alternative data sources
- Scheduled deployment and updates
- Open share restrictions

### Feature

- Anticipated TCO for 3 years
- Vendor Viability
- Organisational fit
- Support materials and user documentation
- Training provision
- Product reliability
- Vendor Road Map

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## Selection – Database

### Document Server

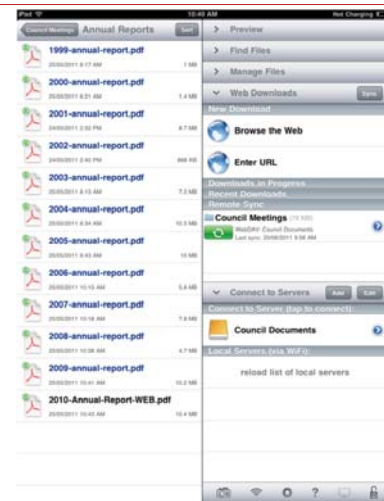
#### Microsoft SharePoint Standard 2010

- » Active Directory Integration
- » List Management
- » Personalised web portal login
- » Pre-created with personal space
- » Documents are centrally stored
- » Internal Cloud?
- » View by permission groups
- » Site managers

### User Interface

#### GoodReader

- » Annotation capabilities
- » All-in-one solution: Download -> Add Notes -> Sync to SharePoint
- » Works in both landscape and portrait mode.

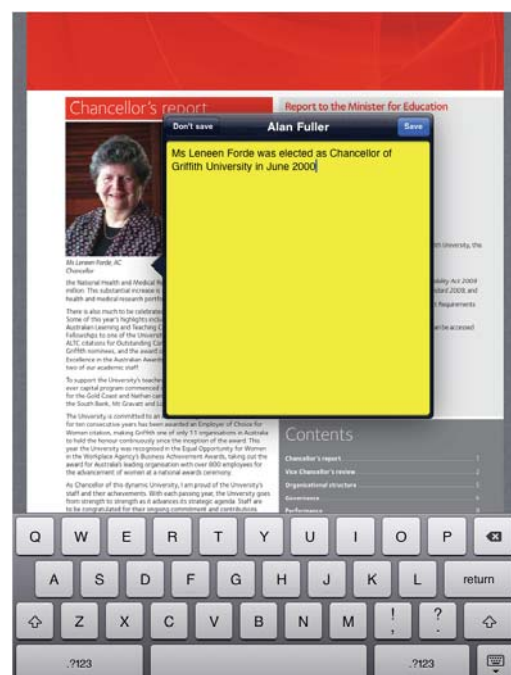


Courtesy of Mr. Alan Fuller  
Office of the Director (ICTS)

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## Trial Solution – User Interfacing

### SharePoint server + GoodReader on iPad



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## Requirements – MDM Services

### Device Preparation

- Image creation / Profile setup
- Deployment
- Selection of Applications
- E.g. Griffith App through Apple App Store

### Device Deployment

- Remotely deploy applications

### Devices Support

- Updates
- Remotely connect to the device
- Remotely secure/wipe the device
- Software licensing terms

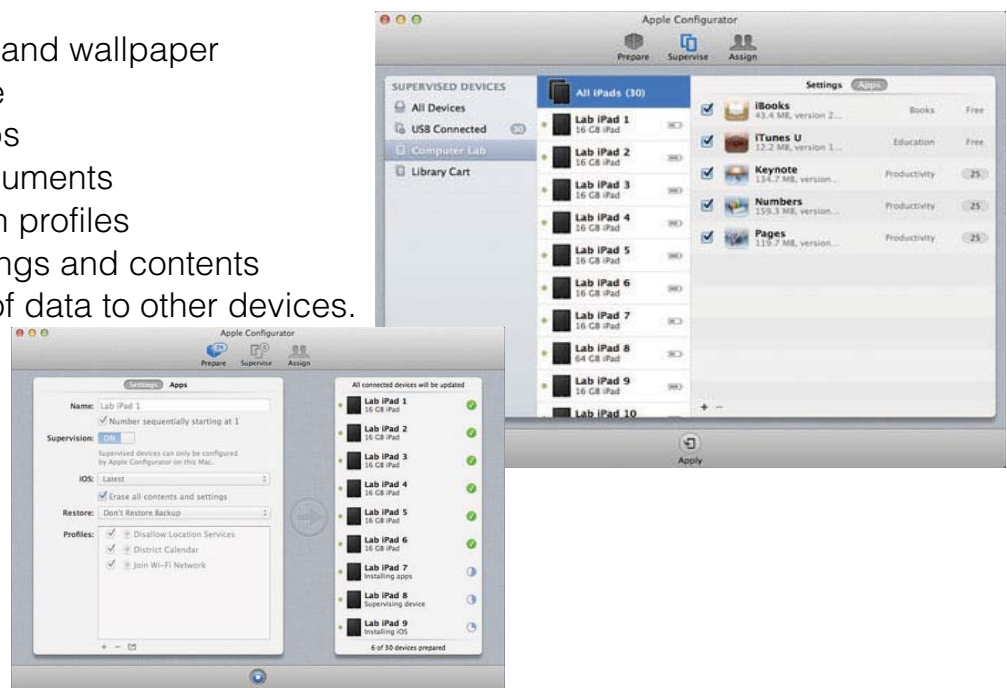


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## Trial Solution - MDM

### Apple Configurator (Beta Test Platform)

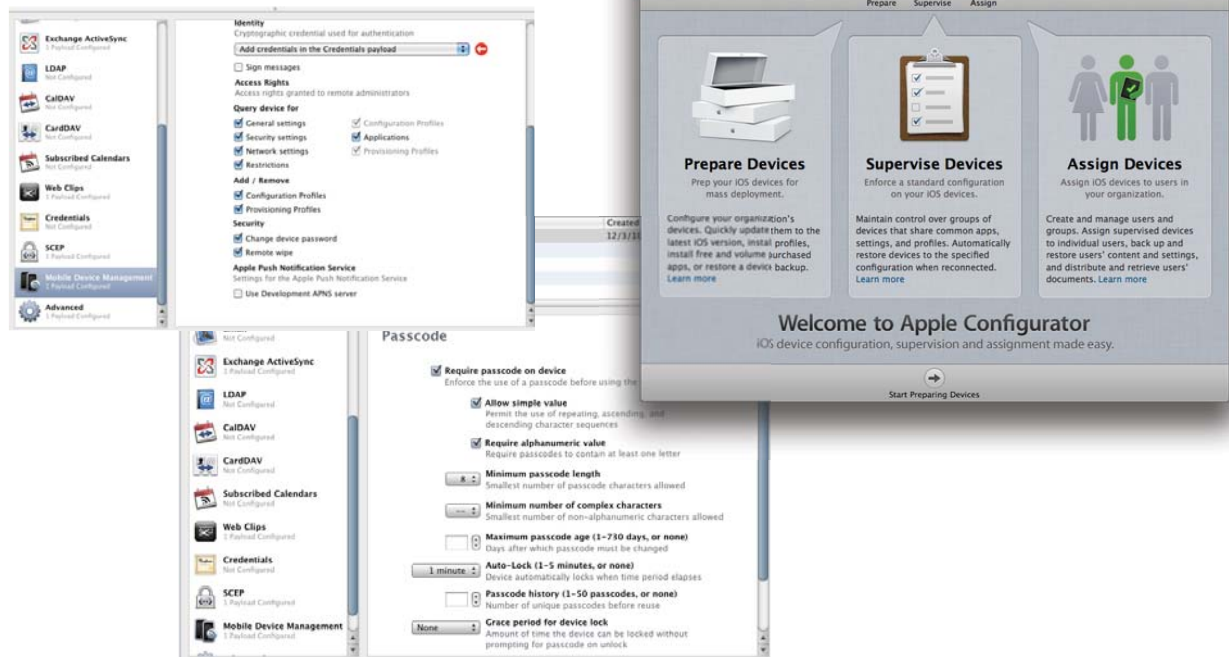
- iOS updates
- Lock screen and wallpaper
- Device name
- Installed apps
- Installed documents
- Configuration profiles
- Backup settings and contents
- Restoration of data to other devices.



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## Trial Solution – MDM – Cont'd

### Profile Creation and Deployment



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## Trial Solution – MDM – Cont'd

### Apple iPad Learning Labs



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## What we have learned?

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### **Current issues**

#### **User experience**

- Selection of pilot group
  - Technical / Self-sufficient
- Expectation of a roll-down
- Implementation of management tools at an accelerated rate.
- User Interface
- Connectivity
- Portability
- Security

#### **Transition from paper form**

- Annotation
- Reading habits

#### **Technical support**

- Offsite usage
- Remote Mobile Desktop Support
- Virtualisation of applications

### **Future Development**

#### **Staff**

- Administration groups
- Academic areas
- BYO devices

#### **Student**

- BYO devices

## Any Questions?

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# Thank you