

**Birkbeck experience of being a pilot  
institution for the LMN / InTechnology  
Off-Site Data Storage Project**

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*LMN / InTechnology Launch 22 Sept 04*



# Outline of Presentation

- **Birkbeck's drivers for being interested in an online data backup service**
- **Benefits of InTechnology VBAK / VBAK Plus services**
- **Importance of LMN community approach in our decision to pilot the services**
- **Our experience of the remote backup pilots**
- **Current / Next Steps**
- **Concluding Remarks**

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# Birkbeck Drivers

- **Increasing complicated server and storage infrastructure**
- **Capacity issues with Legato-based backup tape library system**
- **Increasing volumes of data requiring backing up**
- **Significant amounts of data held on departmental servers**
- **Backups taking increasing time to complete**
- **Increasing technical support staff time spent on checking backups / recovering data from tapes**

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# Birkbeck Drivers (cont.)

- **Disaster recovery considerations moving up the institutional risk management agenda**
- **High risk of major security incident affecting College's Central London location**
- **Legal obligations to ensure adequate protection of corporate / personal data**
- **Existing arrangements for offsite storage of backup tapes not considered to be adequate**
- **Increasing centralisation of MIS functions previously devolved to departments (e.g. student records)**
- **Need to ensure adequate protection of all the institutional critical data (central / departmental)**

# Requirement of a new data backup system that provided:

- **simplified management of data backup and restores**
- **high degree of reliability and security**
- **scalability**
- **disaster recovery provision**

LMN made aware of our requirements

# Automated online /offsite data backup service?

**Aware of such services but not seriously considered**

- **regarded as being too expensive**
- **Instead we were intending to upgrade / replace tape library**
- **Explore SAN based backup options**
- **Backup to disk**
- **Hosting**

# Outsourcing?

- **loss of control / flexibility**
- **security**
- **culture of trying to do everything in-house**

**until....**

**LMN approached us about the  
InTechnology Managed Data Backup  
Services**

**We attended InTechnology presentations  
to explore potential benefits of these  
services**

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# Potential benefits

- **Provided backup solutions for our supported platforms (Windows / Unix)**
- **Highly scalable service**
- **Allow us to offer the service to departments and research centres**
- **Simple charging model (pay-as-you-use) based on actual data held at InTechnology data centre**
- **Exclusion of duplicated files and data compression**
- **An easy to use management interface for VBAK**

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# Potential benefits (cont.)

- **Automated service and online restores**
- **Reduced staff time on data backups which could be used more productively**
- **Offsite storage in a secure data centre (24x365 monitored) well removed from our Central London location**
- **Disaster recovery arrangements (online or portable disk restore)**

# LMN Role (key)

- **Undertaking market research**
- **Identifying potential commercial supplier**
- **Negotiating partnership agreement with InTechnology**
- **Reducing costs through economies of scale**
- **Sharing cost of LMN/InTechnology Inter-link**
- **Ensuring best value for money**

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# Reassess Outsourcing Reservations

- **Can we ensure that the institution's critical data is backed up and covered for disaster recovery purposes better than InTechnology can do for us?**
- **By maintaining this provision in-house are we adding any value to our remit of supporting learning, teaching, research and administration activities of the institution?**

# Concluded ... that

**Selective outsourcing of IT services is in our interests and should be considered in specific areas where they can be shown to be cost-effective**

# Remote Backup Pilots

- **Utilising: VBAK**

**Backups carried out on a representative sample of CCS Intel (Windows 2000) servers (including user file store, Microsoft Exchange, SQL and Oracle databases, and various application servers)**

- **Utilising: VBAK Plus**

**Backups carried out on a representative sample of CCS Unix (HP / Solaris) servers (included servers utilised for: email gateway, web, user file store, user registration system, and Oracle databases)**

# Test plans and technical acceptance criteria

## included verification of:

- **Ease of scheduling automatic backups**
- **Speed of backup**
- **Checking data backed up correctly**
- **Impact on local systems / networks**
- **Security**

- **LMN/InTechnology Interlink**
- **Successful recovery of backed up data.**
- **Disaster recovery tests**
- **Adequacy of reporting**
- **Functionality of management software**

# Experience of pilots:

- **LAN Analyser Report (Analysis of Windows-based servers)**
- **Proved very useful in analysing data storage on our Windows servers**
- **Helped identify data that should be archived / excluded from backup**

# Experience of pilots (cont.)

**Pilots have taken longer than anticipated:**

- **Teething problems in installing the VSG (Virtual Service Gateway)**
- **Some Unix servers required updating of OS patches to be compliant with VBAK Plus client software**
- **Technical support staff not been able to concentrate fully on this project due to other pressures**

# Results of Pilots

- **InTechnology services have met the agreed acceptance criteria**
- **Confirmed functionality, performance and management aspects of both VBAK and VBAK Plus services**
- **We are also happy with the technical support provided by InTechnology**

**Detailed test plans are available for both VBAK and VBAK Plus**

# Current / Next Steps

- **Refine backup policies to identify only the critical data that is appropriate to backup via VBAK/Plus**
- **Develop policies and procedures for the archiving of less critical data**
- **Develop systems to replicate critical applications / data between the College's data centres**
- **Our Legato-based backups are not redundant yet - we need to maintain them for the foreseeable future to backup up non-critical data**
- **Explore enhanced functionality options for backing up Oracle databases and Exchange data**
- **Promote the LMN/InTechnology service within the College and encourage departments to use this to backup their critical data**

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# Concluding Remarks

**We feel that the LMN / InTechnology partnership has facilitated the provision of a cost-effective service providing us with:**

- Increased security of our critical data compared to tape-based systems**
- Increased flexibility and convenience of online backups and restores**
- Improved productivity and morale of technical support staff**
- Peace of mind knowing critical data is stored in a secure offsite location**