



Keeping it Spinning: A Background Check on Virtual Storage Providers

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Information Commons

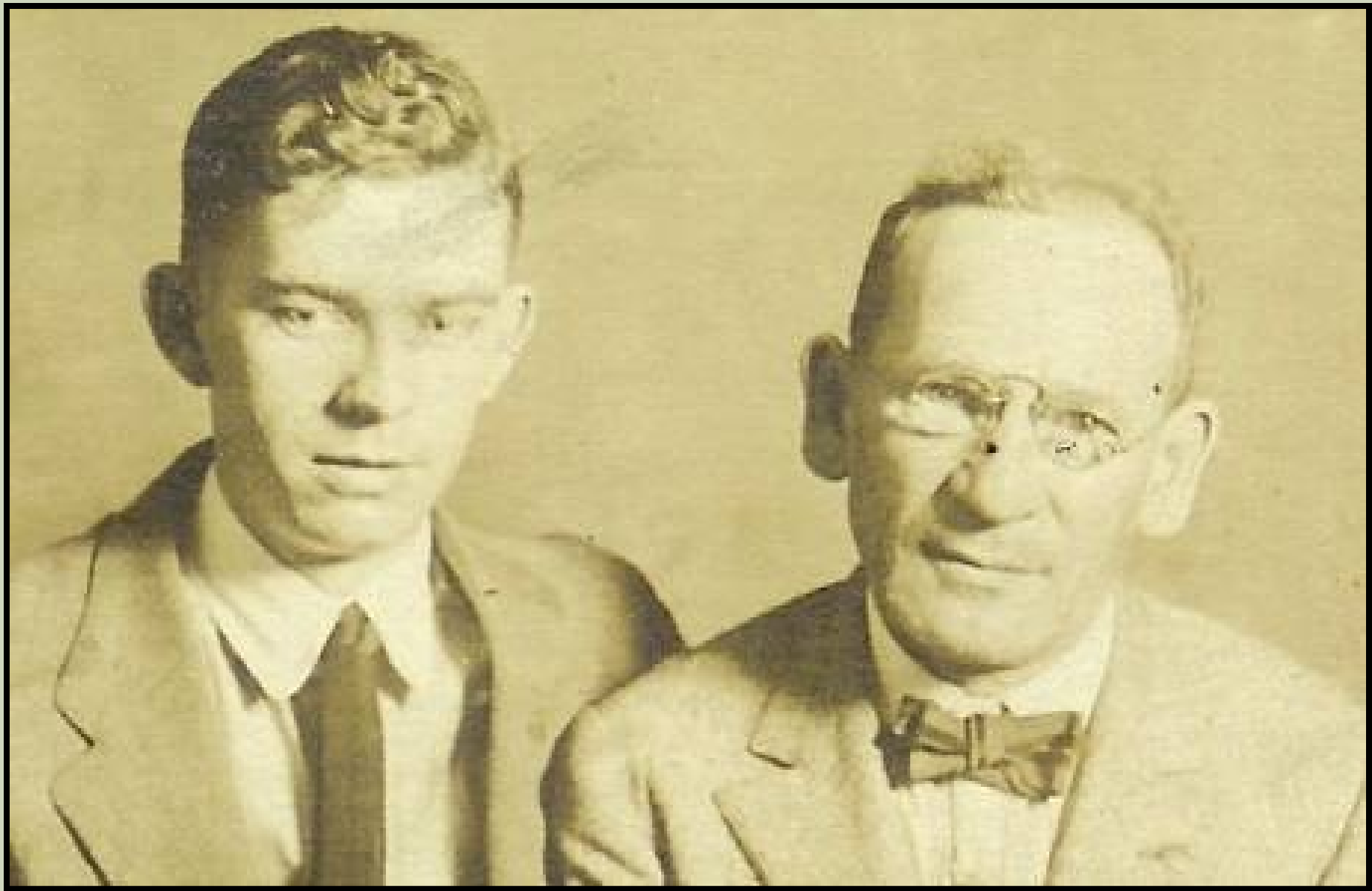
Family History Library

Minnie and Bonnie Wagers

How Important is Secure Storage?



Robert and Charles Jacobs



Objectives

1. Determine the physical safety elements of virtual storage
2. Exhibit the need for virtual storage industry standards



How secure is data
stored online?

Driving Factors and Background:

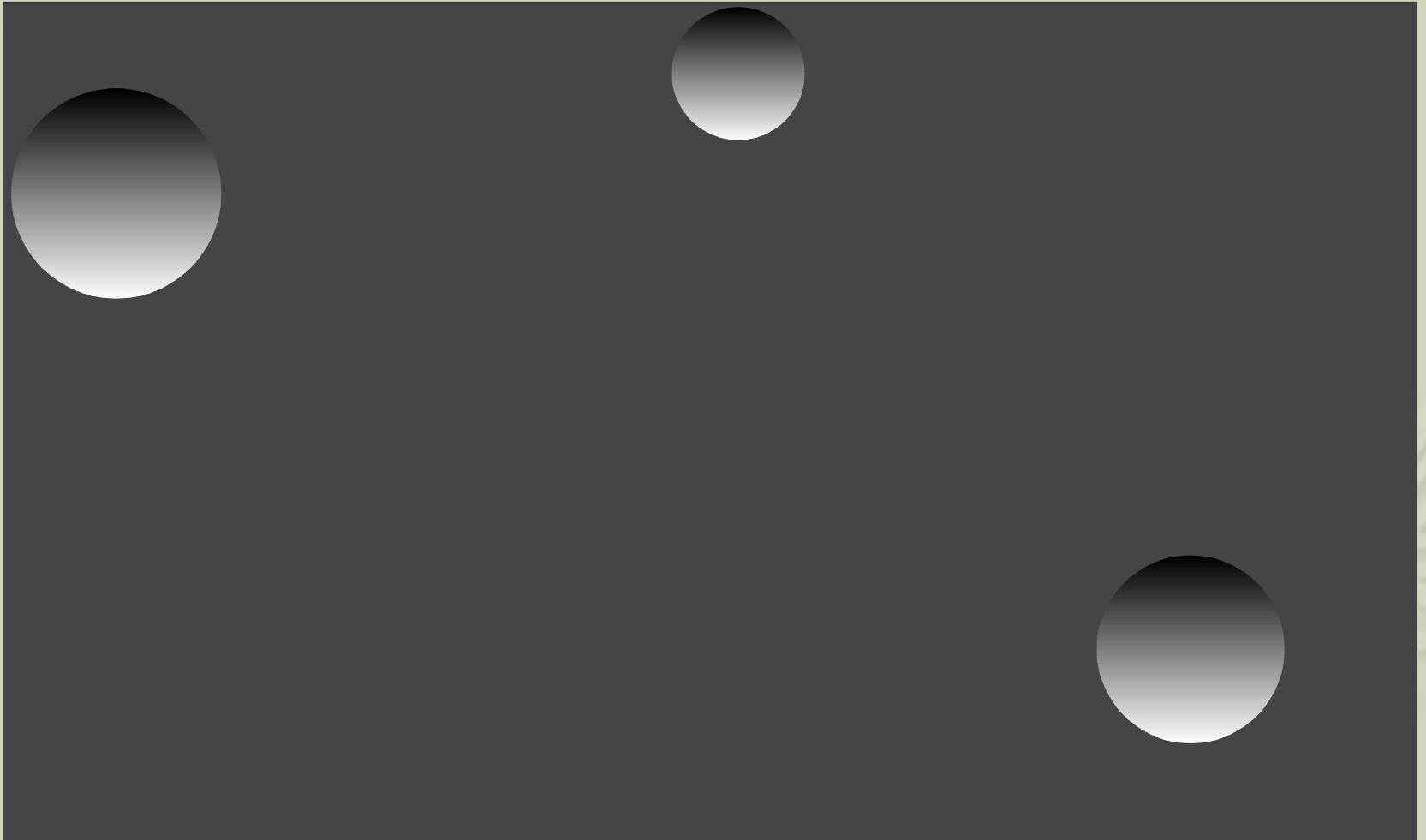
- ❖ Springboard off of last year's solutions
 - Millennium CD and “Keep it Spinning”
- ❖ Preservation of genealogy
 - Correspondence, data, images, audio, video
 - Safety of data
- ❖ Lack of industry standards and regulation
 - No government involvement at present
 - Future involvement?

Virtual Storage Safety Criteria

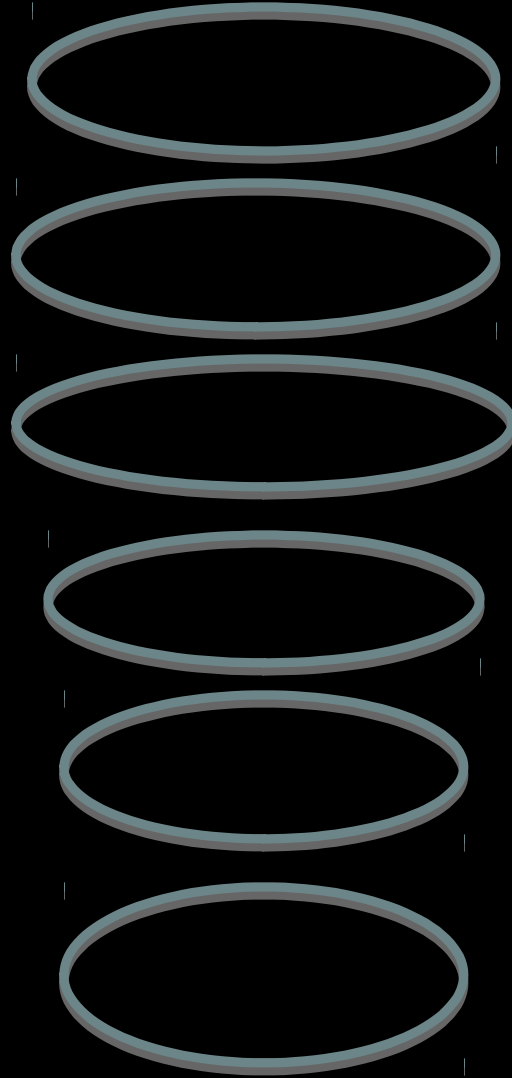
- ❖ Server ownership
- ❖ Server redundancy
- ❖ Location redundancy
- ❖ Vendor redundancy
- ❖ Tape library backup
- ❖ Storage capacity
- ❖ Monitoring system
- ❖ Service to damaged equipment



Virtual Storage Providers



Virtual Storage Layers

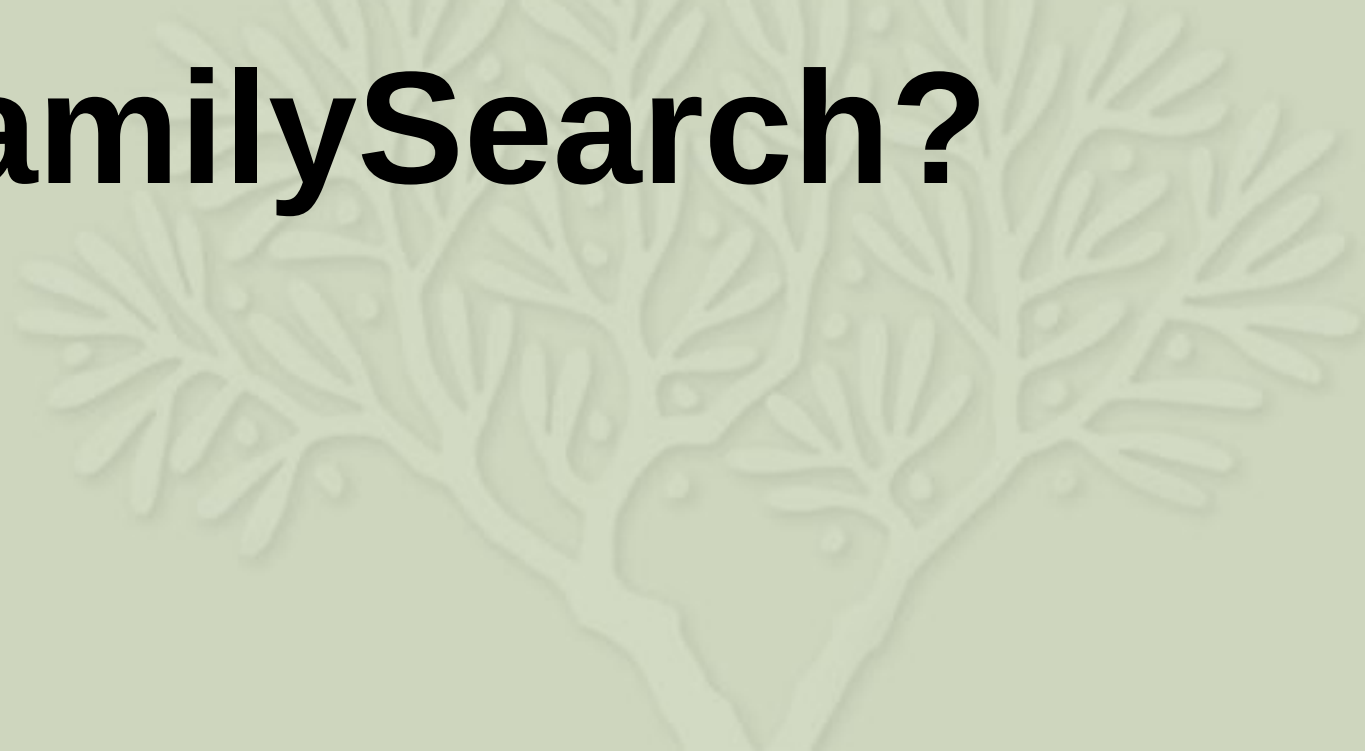


Provider	Site	Requested Info?	Responded?
iBackup	www.ibackup.com	Y	Y
Live SkyDrive	Skydrive.live.com	Y	N
Google Docs	Docs.google.com	Y	N
Lighthouse	N/A	Architect only	N/A
Winkflash	Winkflash.com	Y	N
MediaMax	www.mediamax.com	Y	N
Amazon S3	Aws.amazon.com	Y	Y
Filegenie	www.filegenie.com	Y	N
Writeboard	www.writeboard.com	Y	N
	www.writely.com	(See Google Docs)	
Writely			N/A
Allmydata	www.allmydata.com	Y	Y
Mozy	www.mozy.com	Y	N
strongspace	www.strongspace.com	Y	N
	www.mediamax.com	(See Media Max)	
Streamload			N/A
	www.xdrive.com	Contact Info Physical address only	
Xdrive			-
	www.openomy.com	Software Company	
Openomy			N/A
Omnidrive	www.omnidrive.com	Y	N
Box.net	www.box.net	Y	Refused
	www.carbonite.com		Partial/Refuse
Carbonite		Y	d

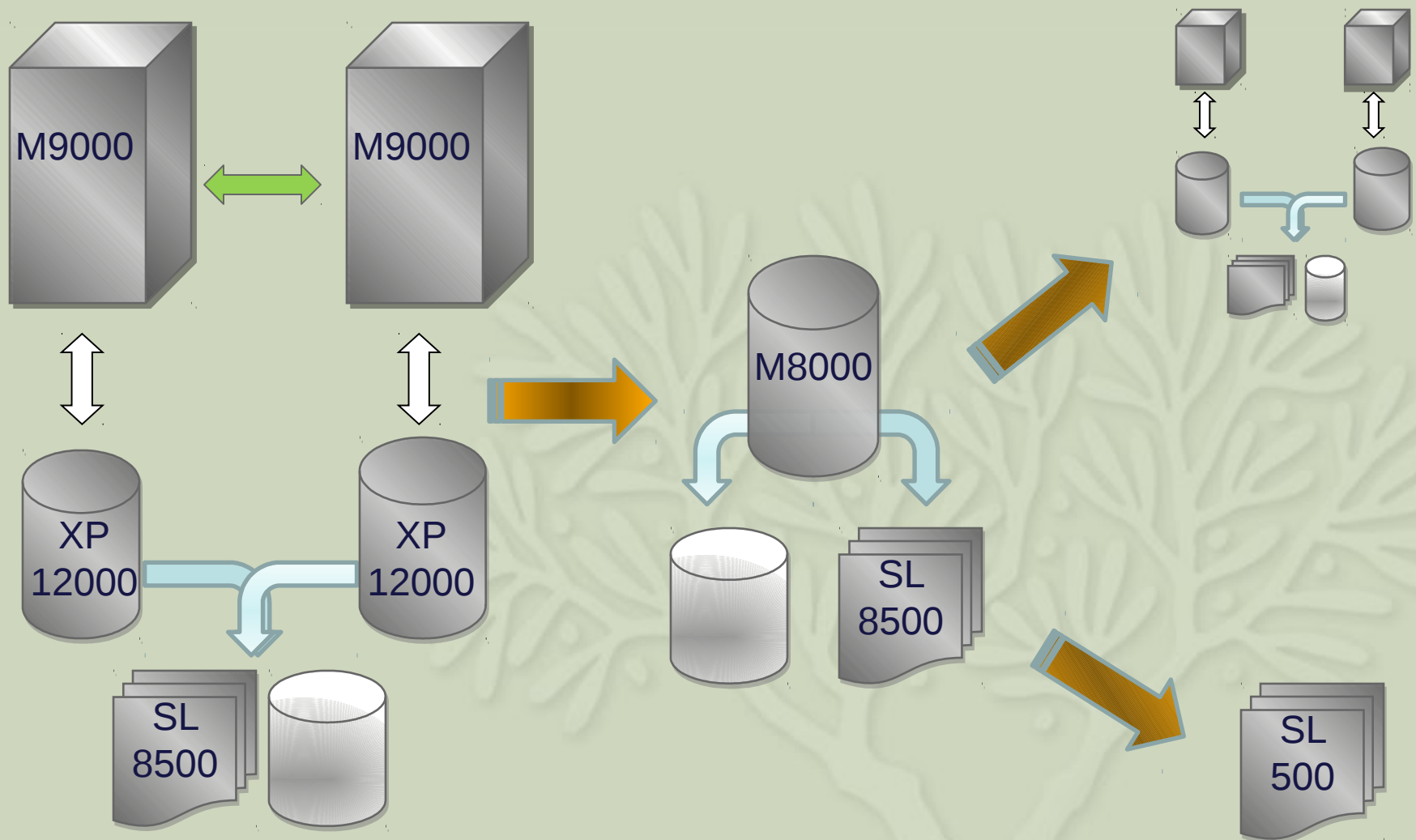
Virtual Storage Provider	Owns Servers	Redundant Data on Servers	Data is Location Redundant	Vendor Redundancy
iBackup	Y	Y	Y	N
Amazon S3	Y	Y	Y	-
Nirvanix	Y	Y	Y	Y
Files Anywhere	Y	N	-	-
Drive HQ	Y	Y	N	Y
My Other Drive	Y	Y	N	N/A
All My Data	Y	Y	N	Y

Virtual Storage Provider	Tape Library Backup	Storage Capacity	Monitoring Equipment	Equipment Maintenance
iBackup	N	1000s TB	-	-
Amazon S3	-	∞	24/7, 365	-
Nirvanix	N	1 PB	Redundant 24/7, 365	99.999% Uptime
Files Anywhere	-	-	-	99.9% Uptime
Drive HQ	N	-	Server and Network Monitoring	-
My Other Drive	-	∞	-	-
All My Data	N	100 TB	-	2/3 Server Failure = 100% data recovery

What about New FamilySearch?

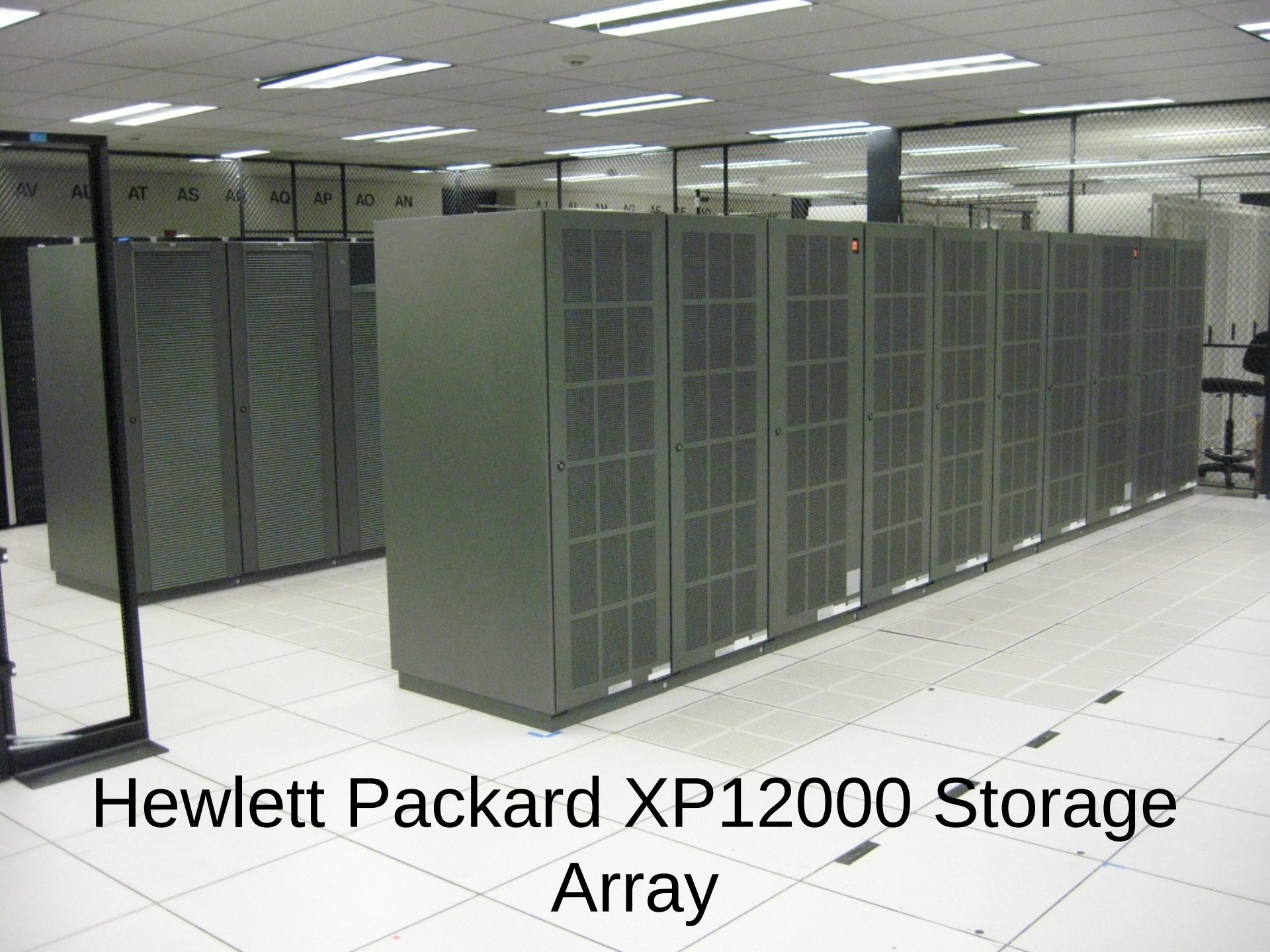


New FamilySearch Online Pedigree



Sun Microsystems M9000 Servers





Hewlett Packard XP12000 Storage
Array

StorageTek SL 8500 Tape Library

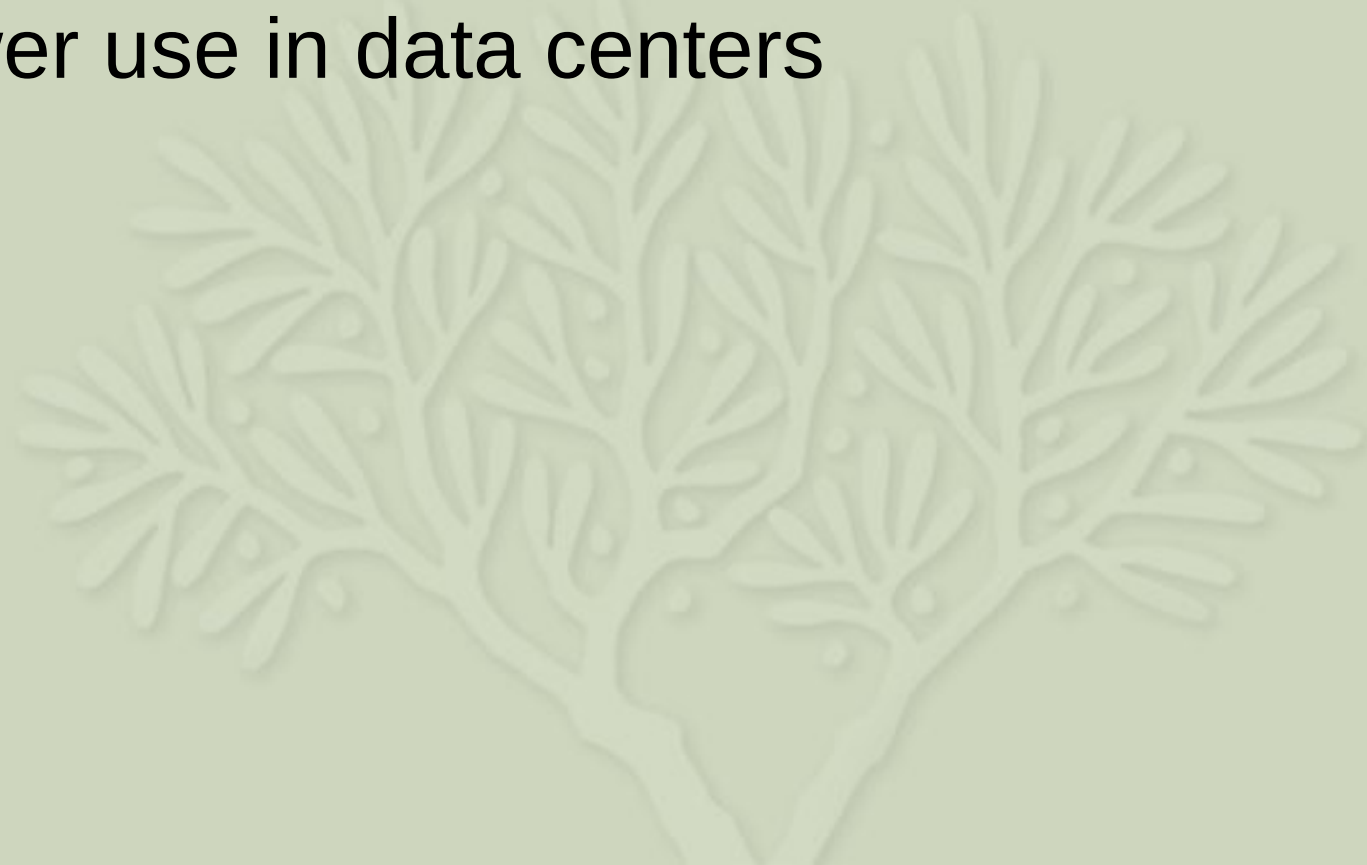


New FamilySearch Online Pedigree

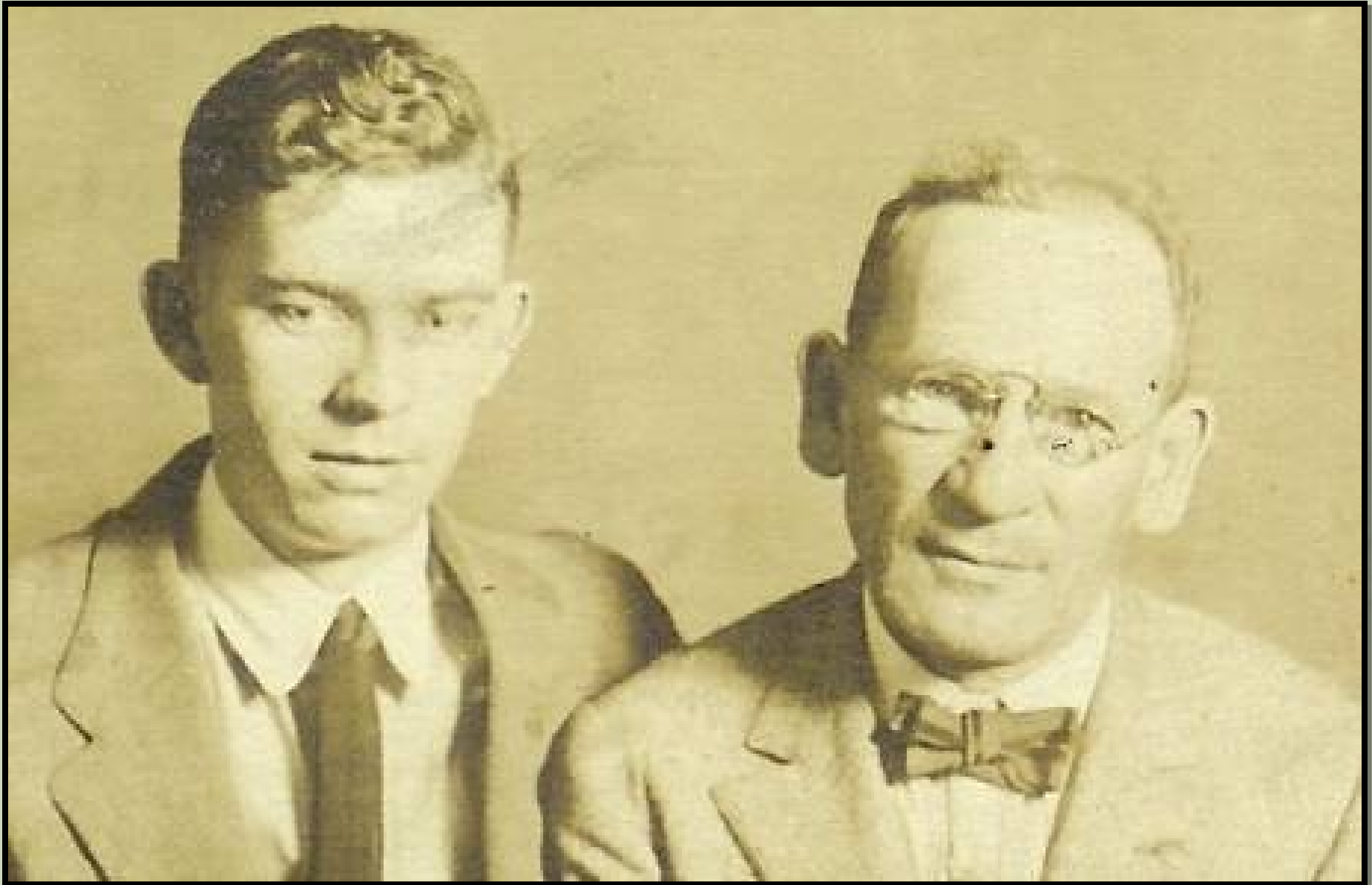
- ❖ Full ownership of equipment
- ❖ Mainframe-like servers, plus storage array
- ❖ Simultaneously syncing data
- ❖ 2 virtual tape libraries, 3 tape libraries
- ❖ Location redundancy 2500 miles apart
- ❖ Human redundant monitoring 24/7:365
- ❖ Estimated 6 minute annual downtime
- ❖ 2.2 PB spinning with 10 PB tape backup

Summary/Conclusion

- ❖ Need for industry standard
- ❖ Possible future Government involvement due to power use in data centers



Charles Jacobs



Questions?

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