Case Study: When Outsourcing Goes Awry
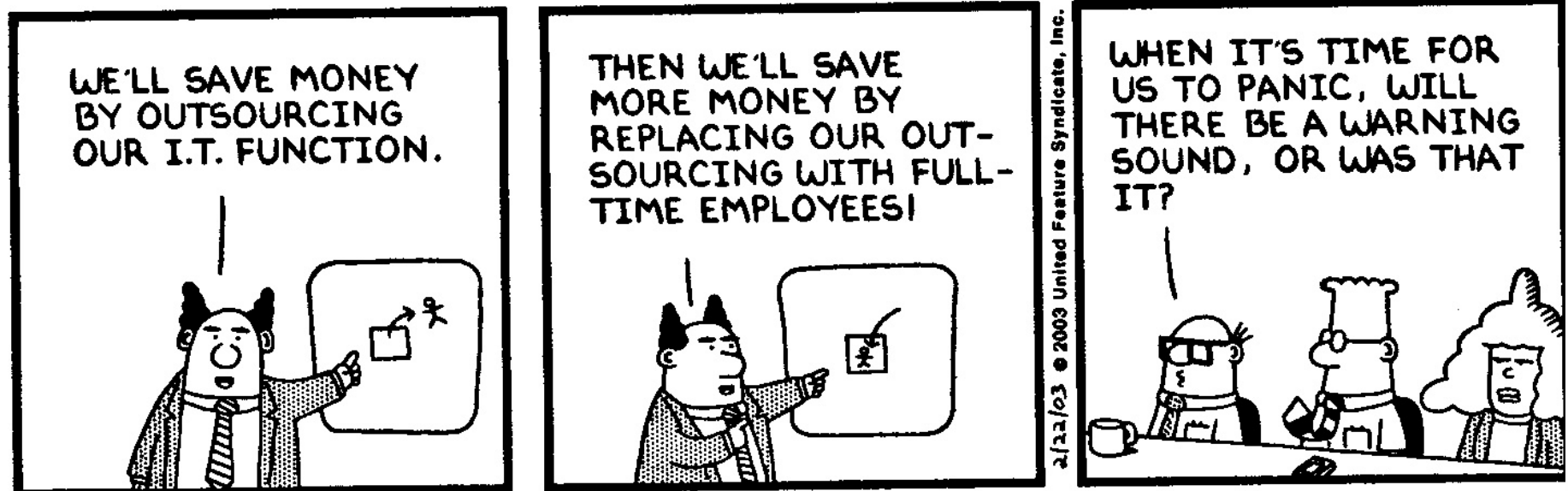
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Blount Inc., Oregon Cutting System Group

The real reason why people outsource

- **Introduction**

- **Company History**

    Blount, Inc. was founded in 1946 and was incorporated in the state of Delaware in 1971. Today, Blount International, Inc. is a diverse, high-performing industrial company consisting of three business segments: Outdoor Products Group (OCSG), the Industrial and Power Equipment Group, and the Lawnmower Group. These segments operate worldwide and manufacture and distribute products in over 100 countries around the world. Headquartered in Portland, Oregon.

- **Company size**
    - Blount - YE 2005 $756 million, over 3000 people
    - OCSG - YE 2005 ~$452 million, 2700 people

- **Locations OCSG:**
    - Manufacturing: Portland, Oregon; Guelph, CA; Curtiba, Brazil; China; Windsor - Milan, Tennessee; Fredericks - Kansas City, Missouri;
    - Sales / Distribution: Belgium European HQ; Branch offices in UK, France, Germany, Sweden, Russia and Japan.

- **Products:**
    - Saw Chain, Bars and Sprocket for chainsaws
    - Lawn Mower Blades
    - Trimmer line, Lawn Mower Parts, Lawn and Garden Tools, Chain Saw Accessories

The SAP Project

- **Official Kick-Off – October 2002**

- **Objective – Implement SAP in OCSG 13 Locations on a single DB instance**
  - **Portland OR, Canada, Brazil, Belgium, Milan Tenn, KC MO, UK, Germany, France Sweden, Russia, China, and Japan (2006)**

- **Landscape: All locations had their own Business & Computer Systems**

- **Problem: Where will the 24 X 7 Global SAP single instance environment reside?**

The Evaluation

- **Evaluated hosting of the Production Systems ourselves vs. outsourcing**

- **Choose to locate production systems physically offsite**
  - 24X7 nature of our worldwide operations
  - Electrical power and cooling redundancy
  - Allowed Blount's Portland data center to be the disaster recovery site
    - This saves approximately $20,000 per month for DR services
  - More politically acceptable to the organization as we transitioned to a single instance application
  - Offloaded much work from a project that was already huge

- **Elected to Outsource**

The Solution

- **Submitted RFPs to several hosting companies, on the top of our list were:**
  - Nexus
  - Siemens
  - SAP

- **Selected Nexus as the hosting company to build and manage our production environment**
  - Significantly lower cost then other outsourcing companies
  - Smaller organization; allowed customers more flexibility
    - SAP could reside within our Windows Domain
    - Allowed Single Sign-on
    - Promoted easier printing
    - Sandbox, DEV, QA, Training systems could be under our control, which greatly reduced the hosting cost

The Design

Blount SAP Environment
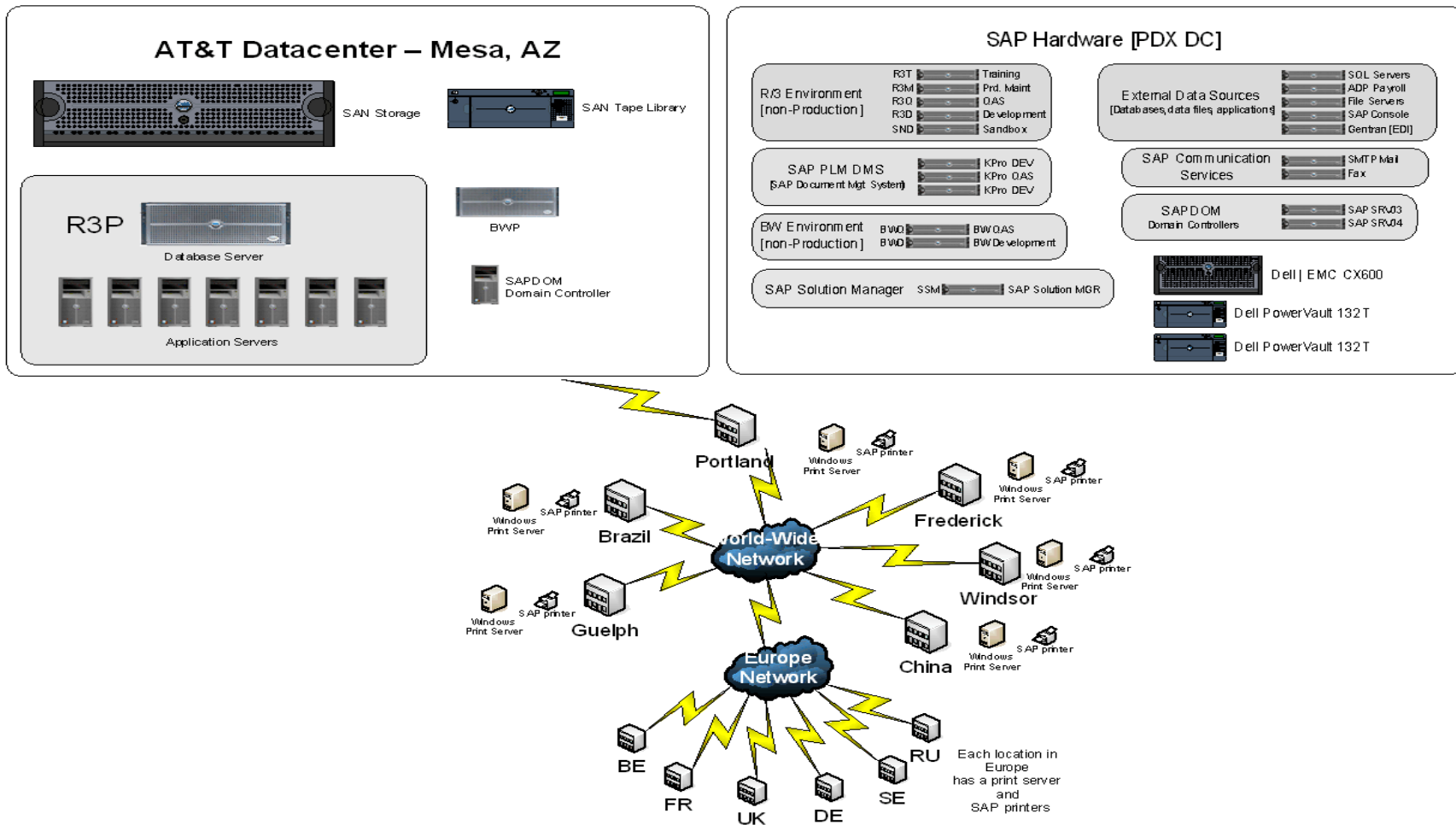
One Big Happy Family

Timeline to Disaster

- **March 2003 – Sign contract with Nexus**

- **June 2003 – Accepted the System**

- **October 2003 – Corio buys Nexus**

- **November 2003 – Portland & Guelph goes live**

- **January 2004 – Ran out of disk space on a log file**

- **March 2004 – Firmware Upgrade on SAN**

- **March 2004 to May 2004 – Performance Issues**

- **May 2004 – Move us to a SAN owned by AT&T**

- **June 2004 – Life was good**

It went downhill from there

- **March 2005 – IBM buys Corio**

- **May 2005 – Blount request more disk**

- **May – June 2005 – Corio / IBM wants us to move off of the AT&T SAN**

- **July 2005 – Disk space became critical**

- **July 6,2005 – Told they could put emergency disk in, but we need to commit to get off the AT&T SAN (AT&T was going to decommission it)**

- **July 11 -21, 2005 – SAN Move Discussions took place**

- **July 22, 2005 – Go / No-Go Conference Call**

- **July 23 -24, 2005 – SAN Move**

Hell broke loose

- **July 24, 2005 – System release back to us**

- **July 25, 2005 – The fan was hit**

  - **10:00 AM -** As the load increase response times increased

  - **11:00 AM -** Transaction times went from 1 second to 15 minutes

  - **2:00 PM -** From what we can tell the files were not spread properly as per SAP, also had a concern spindle speed

  - **3:00 PM –** Authorized IBM / Corio to take system to add more disks

  - **10:00 PM –** System release back to us

Got worst before it got better

- **July 26, 2005 – What is going on here?**
  - **7:00 AM –** Early reports from Europe and Canada that response time is very poor
  - **7:30 AM –** Requested a conference call with Sr. Mgt at Corio / IBM to included my boss the president of the group
  - **8:00 AM –** Phone contacts at IBM and SAP to help put pressure on the Corio unit
  - **8:30 AM –** Response time was degraded from the day before
  - 8:30 AM – Our technical staff notice a switch setting on our SAN and wonder how IBM had that switch set on the production SAN
  - **8:40 AM –** Asked Corio / IBM about this switch setting
  - **9:55 AM –** Response time improved tremendously
  - **10:00 AM –** Had our Sr. Mgt Conference Call, performance was acceptable but still not optimal

Where do we go from here?

We needed to have a plan by September 2005
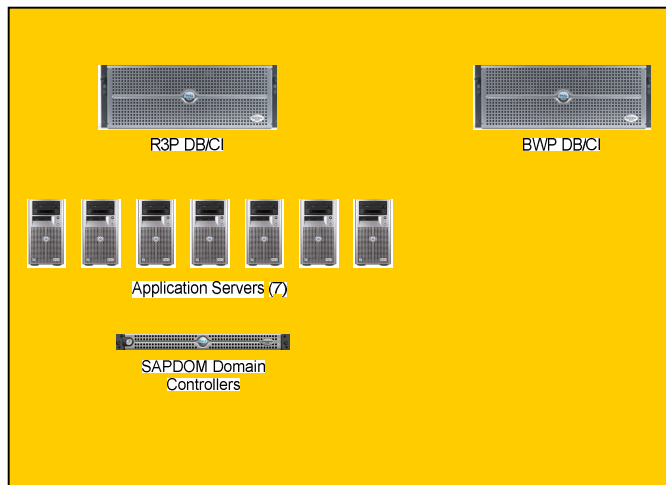
Costs – IBM Applications on Demand

- **$42,000 per month / $504,000 per year**
  - **Note in 2005 we cut a new backup proposal which would have cost an additional $40,000 a year, until the end of the contract.**

- **Cost at initial contract and start-up was $26,000 month / $312,000 year**
  - **Increased costs due to addition of several Application Servers and 380GB of storage to satisfy performance and data growth requirements**

- **Based on a monthly "Per-Server" charge and $10 "Per GB" of storage**

- **Still governed by the <u>original</u> "Nexus" contract**

- **Contract Expires on September 2006**

Key requirements

- **Refresh the hardware**
  - At end of contract, equipment will be near end-of-life and off vendor support
  - Must allow for future SAP enhancements
  - Expanded use of BW

- **Address "known" technical issues**
  - Storage design, performance, and capacity
  - Data backups need to improve
 - Both issues will require significant hardware changes

Server Hardware Comparison

Current

R3P DB/CI

BWP DB/CI

Application Servers (7)

SAPDOM Domain
Controllers

Proposed

R3P DB
cluster

BWP cluster

R3P CI
cluster

Backup Server
(Veritas)

Application Servers (7)

Backup Verification
Server

Standalone SQL
server

SAPDOM Domain
Controllers

- Fail-over servers are not fully implemented. We lose BW if primary R3 system goes down.

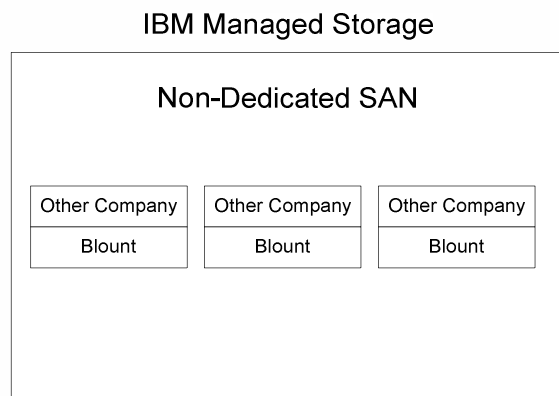- Database & Central Instance functions are combined on one box.
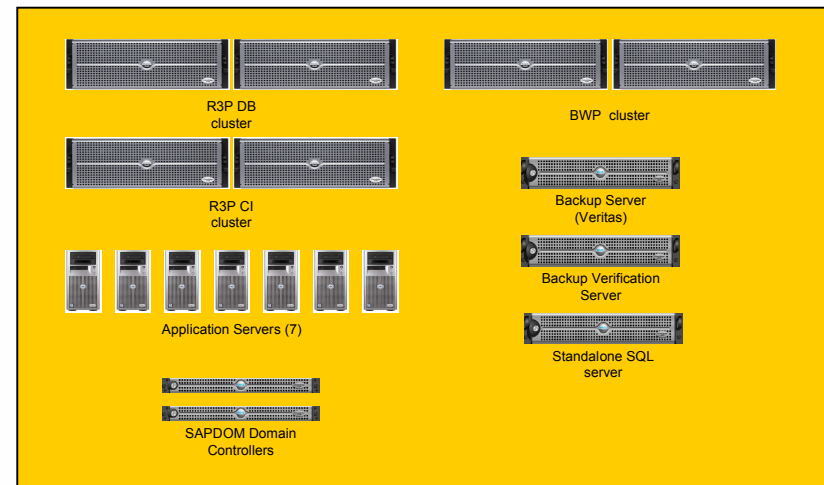
- Database & Central Instance functions are separated for optimal performance.

- Fully Redundant Fail-over servers.

- SAP Interfaces reside locally with the SAP systems rather than communicate over the network.

Storage Hardware Comparison

Current

IBM Managed Storage

Non-Dedicated SAN
Other Company / Blount	Other Company / Blount	Other Company / Blount

Backup → Tape ← Backup

Proposed

Blount Managed Storage

Dedicated SAN

#1 mirror backup to disk

#2 mirror backup to disk

Blount database files are spread evenly over multiple disks

- Storage unit and even the disk drives containing our data are shared with other IBM customers.

- Database files are concentrated in one storage unit.

- Disk to tape backups are a bottleneck and affect the performance of the production systems.
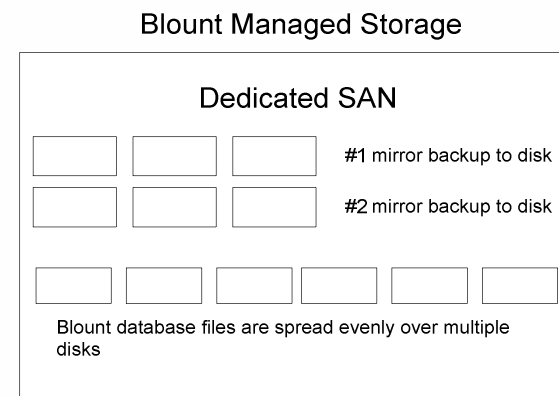
- Storage is dedicated to Blount.

- Database files are spread over multiple storage units which optimizes performance.

- Backups are performed to fast mirrored disk storage, then copied to tape with minimal impact to the system.

- Full system backups can be taken with no system downtime.

Options going forward

1. **Stay the same course**

   - **Renew contract with IBM with updated hardware**
   - **Service Levels must improve**

2. **Move to a different outsourcing company**

   - **Will this be different than Nexus? Corio? IBM?**
   - **We might wind up back with IBM due to industry consolidation**

3. **Take full control over our production systems ourselves**

Cost comparisons

		2005	2006	2007	2008
Current Expense (2006)		**505**			
Plan A (Proposed) **In-source - new hardware environment**					
	Expense budget		521	217	217
	Depreciation *		106	212	212
	Total		**627**	**429**	**429**
Plan B **Renew out-sourcing contract with new hardware comparable to Plan A**					
	Expense budget **		800	950	950
	Depreciation		2	9	9
	Total		**802**	**959**	**959**
	Savings of Proposed Plan		**175**	**530**	**530**
				1235	
*	6 months depreciation in 2006				
**	Actual would likely be higher due to purchase of additional services.				

Hosting Alternatives –
Incremental hardware additions

	Outsource		In-Source	
	Upfront	**MRC**	**Upfront**	**MRC**
Additional Application Server	$635	$5,934	$0	$206
Total Over One Year:	**$71,843**		**$2,467**	
Additional 146GB of Storage	$0	$1,295	$1,250	$0
Total Over One Year:	**$15,540**		**$1,250**	
Addition of CRM (servers only)	$635	$10,612	$0	$926
Total Over One Year:	**$127,344**		**$11,112**	

Door number three –
Manage production SAP systems ourselves

- Hardware would remain offsite at a remote data center, and be managed remotely from Portland

- Portland would remain as our DR site

- Non-Production systems would remain as-is at Portland

- Purchase or lease our own hardware, giving us complete control of configuration

- Use hardware vendor's SAP Specialists to design systems for best performance and growth

- Minimal staffing increase to manage the systems in a 24X7 global environment

Corio / IBM Terminated

- **Purchased new hardware from Dell**

- **Signed Contract with AT&T for hosting**
  - **New environment install in February**

- **Early Termination Letter sent in March**
  - **Three Months before our contract actually expired saving us an additional $50,000 in contract fees**

- **Cutover Was Completed During May 12 to 14**
  - **Include the upgrade of SAP to ECC 5.0**
  - **Included the upgrade of BW to next release, Unicode and SQL 2005.**
  - **So far we have seen a 33% increase in performance**