Small Business Market Symposium

Macworld Expo
San Francisco, January 13, 2006

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Before We Begin

Cell Phones on Stun.... Please
Restrooms
Today's Schedule

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Why Are You Here?

You work at or run a small business. You've made the very wise choice to use the Macintosh and you're also wise enough to recognize that there are a wealth of opportunities to improve the way your business runs and incorporate new technologies that will provide you with an edge over your competition. You want to better manage your current technology and anticipate and plan for your future needs. We want to help you.

Why Are We Here?

We chose to be on the Macintosh

We each run our own small businesses

We help small businesses switch to and grow using Macs and we do this every day

We work in a variety of industries and market segments

We're the same as you! Seriously, if we weren't teaching this seminar we would want to be in this seminar.

We solve the problems we're going to discuss not just for clients, but for ourselves, every day.

Why Are We Here?

How we see working with business

How businesses see us

Our role may vary from client to client

Our goals in working with clients

Managing client growth, needs and expectations

Each of us has a successful consulting practice, and while we're all different in how we do our work, we approach the work in similar fashion; we try to gain a holistic understanding of the businesses we work with so we can work as a business partner.

As a partner, it's our job to deal with the technical needs that exist today, but more importantly, to recognize the future direction of the business and help the business owner to make wise choices and wise investments in the future of the business.

Overview

Small Business Checklist
Office Infrastructure
Servers & Network Services
Business Communication and Collaboration
Business Management Solutions
Technology Management

This is the overview for what we'll be addressing today. This agenda grew out of discussions Phil, Andy and Ben had regarding the way we approach a new business, the questions we ask, the things we know we need to discuss before beginning work, and, amazingly, the things we already know about your business before we start. There's a commonality that all small businesses share, and removing some of it's mystery was our goal here. It was this last point that made this seminar feel critical because we realized that often we knew more about a new client's IT business and needs than anyone else in the company. Now, how could we give this information back in a meeting that didn't cost the client $1000 or more?

Overview

Small Business Checklist

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First up, we're going to discuss a sort of a Small Business Checklist. These are things you may have already faced, know you will face soon, or should be planning for because you will need to address them later. In other words, this is the part where we run through all the areas you need to have at least some knowledge of so that you can make intelligent choices when needed.

Small Business Needs

Small Businesses have a common, core set of needs

Don't stunt your growth

We already know a lot about your business

Appraise your own business

Some things are universal, some things are almost universal, but knowing about these thing allows you to make the right choices to give your business the room to grow. How many of you have purchased storage based on current needs without thinking about two years, three years, five years down the line? If you do SD video editing now is the time to be thinking about the kind of impact working in HD will have on your storage needs.

We hope to get you thinking about these things by giving you examples and talking them through, but the real goal is to get you thinking about your business the way we think about your business. Appraise it, think long term, see roadblocks, look for the holes in future plans. Don't let the fear of cost keep you from at least evaluating all your options.

Small Business Worries

Money Worries
Resource Worries
Style of Working Worries
Planning Worries

We understand that, as a rule, small businesses never have the money they want to have. Purchases get put off to future dates, older equipment needs to work longer, some gear needs to do multiple jobs, and sometimes, no matter how compelling the need, change simply can't happen yet.

But money isn't your only resource, sometimes there isn't manpower, expertise, time, physical space, bandwidth... There are always limits, the goal is to deal with those limits in the best possible way for your business.

Peter Drucker Quote

"The purpose of business is to create and keep a customer."

Every decision needs to be made with this in mind.

Questions to Ask Yourself

What is your industry....really?
How do you communicate with employees?
What is your business workflow?
Do you have people working remotely?
Outsource vs. Lease vs. Own
Do you need to be concerned about security?

Many of you will recognize that we're wandering off into Peter Drucker-land here, but these are valid points to address.

When we ask "what is your industry, really?", we're trying to let you know that we've had many cases where we've dealt with clients who think they're in one business and are focused on handling those needs, but they're really in another industry with very different needs. This comes back to resources. If you're devoting your time and energy to the requirements of an activity that isn't serving your bottom line then you may be able to get those resources back for what really has impact on your bottom line, and sometimes it's looking at the IT needs that will give you that little bit of perspective that shows what's really important for the business.

All of the questions here are designed to help you determine what way you feel will be most effective for your business to run, and that's how you decide what technology needs to be there to support what you do.

Questions to Ask Yourself

What is the level of technology use already in place?

Are certain elements of this technology a barrier to success?

What are you willing to budget/spend?

Do you really know the "big picture"?

What's working and what isn't?

How self-reliant/supporting are you?

What are your colleagues/competitors doing?

These questions are designed to get you clear on your business' IT needs and how you feel best addressing those needs. IT is there to support your business activities, sure, but how much effort are you willing to put into it?

What We Know About You

What we know before we meet

Common Requirements

Solutions for one business are often appropriate in a modified state for another

Certain infrastructure requirements are like plumbing — there's a right way and a wrong way, but it's really necessary

Internet connection, backup, email, contact and calendar, the list goes on but becomes more and more specific. It all comes down to the basic foundation, framework and plumbing… the organization-specific things are built on top of these.

Lessons learned in one business are often correct for another, with minor adjustments. Sometimes the need for more speed means summing two internet connections, sometimes a creative backup solution will be perfect for another company.

But the bottom line is that these things are so basic that there are simple requirements that determine the correct way to handle things. Can't even begin to describe the number of times we've had to explain the various ways backup can be done!

Specific Needs

Individual requirements can vary (e.g. Law firm, Design firm, Vertical markets)

Auditing & Privacy Requirements (Sarbanes/ Oxley, HIPAA, etc.)

In some cases, it makes a lot of sense to consider how your business is different from others. Record-keeping requirements can vary, there may be specific laws that govern how your business is conducted.

For example, your business might only require a backup that allows retrieval of files from the last month (or more) with an archive of a limited set of files. Or your business might be REQUIRED to have a very specific set of files stored in a specific format available to certain agencies within a proscribed period of time.

What do your employees do?

Who owns the data on their computers?
- **Mail**
- **Chat logs**
- **Customized software**

Employee Responsibility
- **P2P FileSharing**
- **iTunes Radio**

It may be important for you to create a manual to govern expectations of management and use of computer resources within your company. Beyond that, it may be necessary to explain some basic things that will matter.

File sharing can open the company to prosecution risks. iTunes radio service can cripple the bandwidth the company pays for.

Dig into the behavior the company finds acceptable and not acceptable.

iChat is a tremendous work tool, but it can also be a time suck for employees. How much freedom of use do you want to encourage? In some instances, the free exchange of information can make your company stronger. A critical digital editing technique your company doesn't know about may turn up when an employee asks a friend on iChat.

Management Responsibility

Conveying internal knowledge
- **How is this done?**
- **Who is responsible?**

Port Blocking/Firewall

IP Tracking, Filtering, Logging

This is where IT can provide solutions!

Do you do training? The Macintosh is so easy to use that the temptation is to simply let people go to work, but training, or at minimum orientation, can help your company and can give you an opportunity to establish expectations.

Have you documented your systems and processes?

Do you have a set standard of knowledge that you expect your employees to have?

Do you actively monitor or track the use of the network?

Do you tell employees (new and existing) that this is your expectation?

Do you need to?

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Office infrastructure refers to the most basic systems, processes and equipment that your business needs to function. Virtually every business that we see has some of these already in place when we get there. Here's where it starts to get interesting…

Office Infrastructure

Needs common to every business

Needs unique to your business

How do you want to communicate within the office?

How do you want to communicate with others outside the office?

Once you're more than one or two people in an organization, the communication needs start to change. What information you communicate and how you share information becomes less about casual interchanges and more about structured ways to talk and exchange data and ideas. Suddenly, it's not enough that you had a conversation, but can you access what you talked about and what and who it related to?

Will others need to share that information in the future? Something as simple as the schedule needs to be available, because changes can be made to it while key people are not present.

Can you repurpose this information and create an "institutional knowledge base" that can save you time as your business grows?

Electrical Needs

Do you have enough power to the office?

UPS & Surge Protection
- **Auto-shut down**
- **Runtime capacity**
- **Dedicated circuits**
- **What gets connected to a UPS?**
- **What doesn't?**
- **Changing batteries**

Generator
- **What gets one?**

Power issues can affect all levels of operation within your company, but priority needs to be placed on infrastructure that supports the entire company.

Network Wiring

Certification - Professional Installation

Cat 5, 5e, 6, etc.

Terminated to patch bay vs. patch cables

Labeling ports

Network map with locations

Enviromental obstacles - flourescent ballasts, high-voltage lines, etc.

Okay… so we mentioned the foundation, framework and plumbing; well, this is it. Network wiring is the most basic element of the plumbing, and one that's most often overlooked. The best technology can be crippled by an underperforming network.

While it's possible to do this yourself, consider bringing in a professional, and that professional is likely NOT your telephone contractor. Network wiring is different and it should be certified, properly mapped and labeled.

Switch

Difference between a hub and switch
10/100/1000
LAN vs. WAN
IDFs vs. MDFs
Backplanes
Copper vs. fiber
PoE – Power over Ethernet
Unmanaged vs. Managed
How much do you need?

Hubs and switches do the same thing and look similar, but how they perform is very different. A switch provides a dedicated pipe to each device and manages the flow of data on each segment. This makes the network faster, a bit more secure and more efficient.

Most desktop Macs and PowerBooks ship with Gigabit ethernet, and the cost of Gigabit switches has fallen to very affordable levels. You don't need to be moving large amounts of data to get the immediate benefit of a switch. Hubs are old technology and should be replaced in even the smallest environment.

For most small companies, an unmanaged gigabit switch is all that's needed to make a huge improvement in overall network performance

Wireless

Security
- **Hiding**
- **Encryption**
  - **WEP vs. WPA**
  - **Cleartext on a non-secure network**
- **MAC Address filtering**
- **Decoy network**

Placing base stations

Wireless networks can be a terrific tool OR a giant security hole, depending on how they're set-up. You can have functionality, security and performance if you plan it correctly.

Only you can determine if you want your wireless network to be "open" or not.

Wireless

Enough WAPs to handle the load
Specifying Channels
Dealing with interference
WDS
Extending your network with Pringles
Cleartext on a non-secure network

Putting your entire 30 machine network on one Airport Base Station isn't going to work. How many users moving what kind of data is an important question to ask and answer when planning a wireless network.

Microwave ovens, 2.4GHz cordless phones, well-constructed buildings, mirrored doors, water, paper towel rolls, all can kill a wireless network.

WDS is only really viable for short-range, non-critical use.

Locating Equipment

Router
- **Quality, size, features**

Firewall
- **Ability to administer**

Telephones/Voice Mail
- **Integration with office processes**
- **Integration with Internet conneciton**

VOIP: Skype, Vonage

You probably don't need Cisco-level equipment, but what do you need? You'll most likely need a router, but the functions it needs to perform will be driven by your specific business' needs. Even the most basic store-bought router needs to be set-up correctly.

Internet Connection

Speed
- **Upload/Download**

Connection Type
- **DSL**
  - **SDSL vs. ADSL**
- **Cable**
- **T1/T3**

Wireless
- **G3 Networks (EVDO, Edge)**

Internet connectivity can be frustrating if there's little or no choices of vendors or technologies. You might need to consider access to these services as part of the choice of where to locate your operations.

The landscape of broadband offering is constantly changing, but most of the vendors out there won't proactively call you and tell you that they've come out with a better package for you. You need to review your needs and choices at least once each year and make sure you're getting the services that you need at the best possible price.

Internet Connection

IP Assignments
- **DHCP**
- **Static**
- **Network Address Translation (NAT)**

Multiple Connections
- **Redundancy/Failover**

External static IPs vs internal static IPs. At least one external, or "routable" static IP is desirable. Why? Would you like to be able to access your server from home? Run your own mail server? Access your FileMaker Pro data from outside the office? Each of these are great reasons to have one or more static IP addresses. Conversely, not every machine in the office needs an external static IP address. This can be a security issue as well as an unnecessary cost.

What is NAT? Not everyone in the company needs to have a real-world routable IP. This would be the equivalent of each person in a company having a direct phone line that can be called from the outside. Instead, NAT is like having a receptionist who answers the phone (using a single real-world number) and then routing that outside call to a private internal extension that's only valid WITHIN the company. The receptionist can also "screen" calls to prevent "junk" or "malicious" calls from reaching the inside.

"Phoning Home"

Connecting back to the office
- **From Home**
- **From Semi-Private (hotel)**
- **From Public area (Starbucks)**

Virtual Private Networks (VPN)
Tethering a phone (DUN)
Evolution Data Only (EVDO)

There are many ways to connect back to the mothership (and to communicate with others when not at the office). There are many security concerns as well when using public networks. Some ways to secure your connection are a little more work than others but more secure connections are generally less likely to get hacked.

A VPN, or Virtual Private Network essentially extends your office network securely to a remote worker. That means that all your network resources such as printers and servers are available just like you're actually in your office (although usually not quite as fast).

Using mobile phone companies as mobile ISPs can work but you have to be careful to understand their terms of service as well as understand their technical limitations.

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Servers & Network Services

What is a server?
- **When do you know you need one?**

Who wears the pager?
- **What do you want to do yourself?**
- **What do you want to outsource?**

Generally speaking, user's workstations doing double-duty as servers do not perform very well. Servers are usually better off sitting in the corner (or better yet, in a locked room) so that they don't get used by others. Servers can sometimes be dedicated to multiple functions.

You don't always have to purchase the most expensive system or buy one with all the bells and whistles. Sometimes, you can take one of your existing computers (as long as it's fast enough for your needs) and add server software to it. Basic file sharing can be done with a plain OS X system. A repurposed G4 tower along with OS X Server makes a great file server or mail server for a small business or workgroup of 5 or less.

Server software generally does things automatically or with fewer steps than if you didn't have it. Server software generally has more options that aren't available if you don't use it.

How much knowledge do you have about setting up a server? How much time and effort (e.g. $) will it take to set it up yourself? Would it be smarter to pay someone to do it who knows what they're doing and can get it done quickly? When it comes to maintenance and fixing things if something goes down, who's going to do it? Would you rather pay for something to be outsourced?

Hosted Services

File sharing
Web
Email
- **POP vs. IMAP**
- **Webmail**
- **Spam/Virus filtering**

Chat
Blog
Print Servers
FTP

Mac OS X Server supports all these services. However, many of these are also built into the regular desktop version of Mac OS X -- you just need to configure these at the Unix command line and have pretty good knowledge of what you're doing. Mac OS X Server adds a Graphical User Interface (GUI) to make setup of these services quick and easy.

File Sharing

Macs (AFP)
Windows (SMB)
Peer to Peer (P2P) or Server based?
Authentication vs Authorization
Number of client licenses?

You can setup a stand alone Mac OS X machine to be a simple file server. You can also setup shares and groups using the free SharePoints software. Windows sharing is also built-in with OS X.

Mac OS X Server can be a more sophisticated server for Windows machines as well. It can act as a master browser for a workgroup and as a Primary Domain Controller (PDC). Using the SMB protocol (thanks to open source SAMBA), Windows clients would have no idea the server they're mapped to is actually a Mac.

It's important to understand the differences between Identification (I am me), Authentication (are you who you say your are?) vs Authorization (Once you've identified yourself, are you allowed to do what you want to do?)

OS X Server has 10 or unlimited clients. This is much much less expensive than Windows server where the base server has only 5 clients and it's nearly as much as Apple's unlimited product.

Email

Hosting your own
- **Mail forwarding**
- **Multiple domains**
- **Management of accounts**
- **POP vs IMAP**

Cost Comparison with Outsourcing

Hosting your email allows it to be more flexible. You have more control over the number of accounts, all the domains you want use, auto-forwarding, mailing lists, etc. Hosting it yourself also allows you to have IMAP access with large storage capabilities. You can also setup web based email.

Outsourcing for this kind of flexibility can be relatively expensive but, again, someone else gets to wear the pager.

Web Hosting

Local Intranets
Hosting your own
- **Static IP**
- **Dynamic DNS**
- **Bandwidth**
- **Virtual Hosting**

Outsourcing
- **Uptime**
- **Bandwidth**

Things to consider when deciding what if you want to host a web server yourself.

How will people connect to it? Create a DNS name for your server and assign it a static IP.

How many people do you expect will use it? What kinds of traffic load (bandwidth) will the server require?

You can host multiple domain names simultaneously and have multiple names actually point to a single domain.

Who's going to host it and who's going to maintain it if it goes down at 2AM? ISPs that specialize in hosting might be better equipped to handle emergencies. ISPs may also have higher bandwidth than you.

If you do host it yourself and you serve to the outside world, what kind of bandwidth transfer quotas does your ISP enforce? You could be in a for a nasty surprise.

Chat/Instant Messaging

iChat & Jabber Clients
Bandwidth
- **Audio conferencing**
- **Video confercing**

Conferencing with Bonjour

Chatting is not just for kids. It's a very powerful business tool. We used it extensively to prepare this talk.

For security purposes, you might want to host your own internal chat server so that the traffic never actually leaves your organization.

You might also want to have your employees create specific screen names that are used just for work purposes. That way, they'll be available for chat with work colleagues but not necessarily available to chat with friends all day long.

Blogging

Hosting your own blog

Blog = Web Log. Mac OS X Server has a new feature allow you to setup a web log. Very simple to setup.

Print Servers

Personal vs. Networked
Best Locations
Connections
Print pools
Print logging & billing
RIP and logging/archiving

OS X has a built in print server in each copy. So, you regain control of your computer as soon as the print job has been spooled.

Networked Print servers allow you to have a bit more control over who can print what to which printer. You can specifiy quotas and you can create print pools. For chargebacks, you can even get products that log all print jobs and produce reports so you know how much to charge each "account".

Some RIPs can actually print and store all jobs. This might be necessary for logging; security; archiving, etc.

FTP

Hosting your own
- **Security**
- **Bandwidth**

Outsourcing
- **Security**
- **Bandwidth**

FTP servers are very useful for distributing or collecting large amounts of data that you don't want to send via email. No size restrictions (as some email accounts have). Security is important too and you have read/write or read/only FTP sites.

Depending on where the server is (i.e. behind a firewall) you may not be able to have FTP clients from the outside world connect to you. In addition, you may not want to have users from the outside use up some of your precious bandwidth if your sending/receiving large files often. So, you may want to outsource your FTP site. Again, who wears the pager?

Hosted Services

Backup
- **One of the most important parts of your network**
- **Inexpensive insurance**

Backup Methodolgies
- **Full vs Incremental**
- **Backup media**
- **Offsite Backups**
- **Regularity of backup**
- **Backing up notebooks**

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How often do you back up? What do you back up with? What do you back up onto?

Backup vs Archiving. Copying files to CDs or DVDs occasionally isn't a real backup. You need to account for restoring an entire system if/when something goes down. How much time and data are you willing to lose? Investing in a backup system that's appropriate for the way you work is cheap insurance... much cheaper than the time/work it will take to get it back up and running in case of a disaster.

Backup

Inexpensive insurance

One of the most important parts of your network

Inexpensive insurance

OK… backup is not a four-letter word! Of course we all WANT to do it, but are you actually doing it right and completely?

How often do you back up? What do you back with? What do you back up onto?

Backup vs Archiving. Copying files to CDs or DVDs occasionally isn't a real backup. You need to account for restoring an entire system if/when something goes down. How much time and data are you willing to lose? Investing in a backup system that's appropriate for the way you work is cheap insurance...much cheaper than the time/work it will take to get it back up and running in case of a disaster.

How you backup is less important than actually doing a backup!

Backup

How Much & How Long?
- **Amount of data being backed up**
- **Bandwidth**
- **Time**
- **Bucks ($)**

The mechanics of your backup are driven by 4 key factors:

1. The amount of data you need to backup,
2. The bandwidth you have available between your data and the backup device,
3. The timeframe you have available to perform your backup, and of course,
4. Your budget.

While a backup solution might be expensive initially, how much would it cost to replace your files? Can you imagine showing up to your office and finding a charred ruin of a building? What would you do? If you've got an offsite backup, you can replace your backup drive and be up and running within a few hours. Even if your data is a few weeks out of date, it's much better than nothing!

Backup

Dedicated Machine
Backup Methodologies
USB Keys – quick and easy
Disk to Disk
Disk to Disk to Tape
- **Full vs Incremental**
- **Backup media**
- **Offsite Backups**
- **Regularity of backup**
- **Backing up notebooks**

While it's possible to run backup server software on a machine that does other things, it's important to note that backup programs can spike machine resources over 90% which may interfere with other operations. However, the backup server does not to be a serious machine, but do use a fast ethernet card.

A backup is not useful if it doesn't go offsite.

During the day, you may want to make quick backups of specific files or folders to a USB key device. Useful for when you're on the road with a notebook and just need to backup a few important files you're working on. Make a folder of aliases of files you want backed up onto this USB key and make sure your backup program can resolve these aliases.

Disk backups offer significant speed boosts over tape, but you may want to also use tape.

Backup

Tape Technologies
- **AIT**
- **DLT**
- **VXA**
- **DAT - obsolete**

Storing your backups
- **Media safe**

Offsite!

Internet backups

Test your backups!

If you've decided that you need to backup to tape, there are several

And finally, if you just backup and never test your backup until you're in trouble, you could be in for a nasty surprise. Review your backup and do random, spot restores to make sure that what you planned to happen is actually happening.

Groupware Servers

Microsoft Exchange

Lotus Notes

Kerio

Now Up-to-Date/Contact

Daylite

FileMaker Pro Server vs. FileMaker Pro P2P

Accounting

Other Vertical Market Specific

If you will be dependent on a groupware solution you will likely get the best results with a dedicated server.

Outside Service Providers

Outsourcing Services

- **Using a provider's equipment and their services**
- **Administrative, technical and business limitations**

Colocation

- **Using your own equipment on ISP's bandwidth**
- **No limits**

The decision of where you locate a server should be based on bandwidth needs, reliability of connection, control over power and environment and cost.

Overview

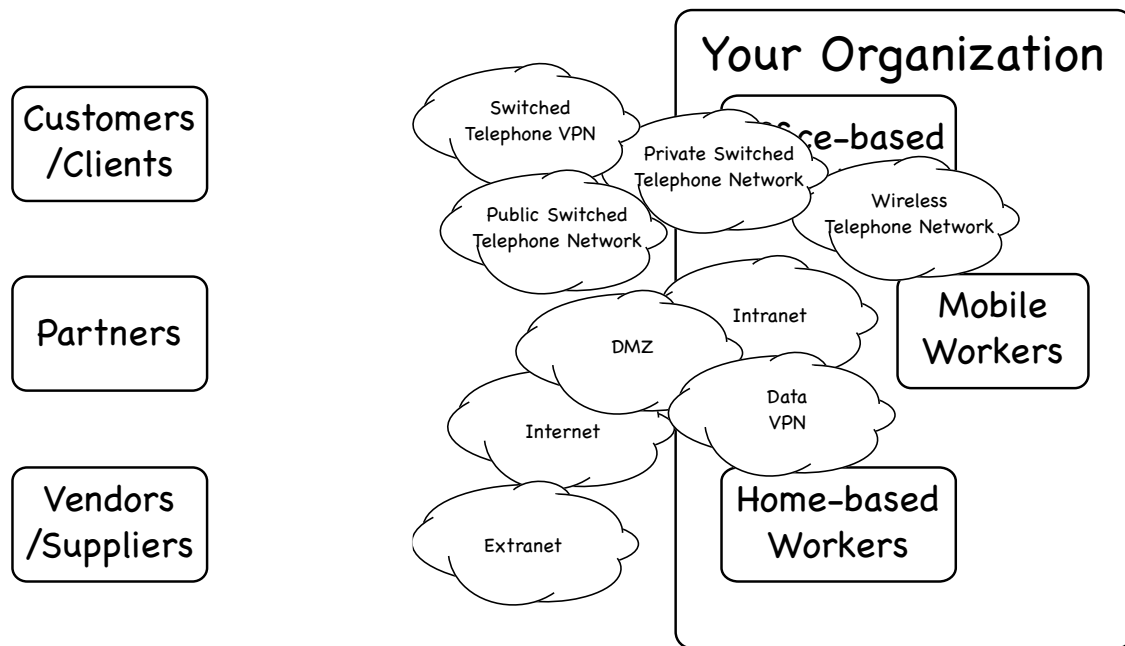**Small Business Checklist**

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Total Communications

Customers /Clients

Partners

Vendors /Suppliers

Your Organization

Office-based

Switched Telephone VPN

Private Switched Telephone Network

Public Switched Telephone Network

Wireless Telephone Network

Intranet

DMZ

Data VPN

Mobile Workers

Internet

Extranet

Home-based Workers

Communication Channels

Telephone

Fax

Postal Mail

Email

Web

Web Forms

Blogs

Instant Messaging/Video Conferencing

Solutions Road Map

**Analysis of
Business Workflow**

**Mission Critical
Applications**

**Communication &
Collaboration Tools**

Infrastructure and Servers
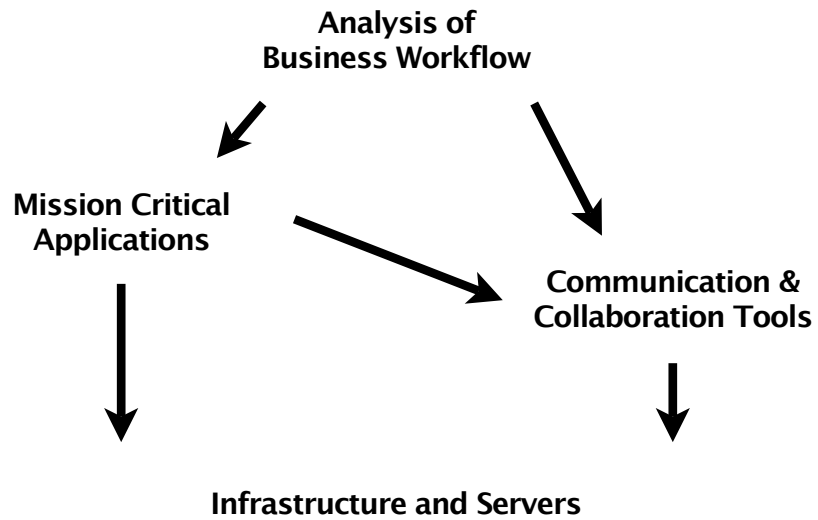
Solutions Road Map

Deploying integrated communication and collaboration solutions

- **Reducing costs**
- **Increasing efficiency**
- **Streamlining internal workflow**
- **Projecting a desired polish, level of professionalism, corporate image**

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Picking Solutions

Macintosh systems have significant built-in communications support

Mac OS X Tiger has a large number of included/built-in collaboration applications

Add/substitute third party applications as needed to build a solution that best meets the unique requirements of your business

I'll focus on Apple software where appropriate. I'll also identify selected third party options and the features they add over Apple's.

Telephony Integration

I'll do a demo at this point that illustrates the functionality available on Macintosh-based telephony integration solutions. Exact demo still depends on wired access to Internet which is required for "realworld" VoIP-based demo.
I'll segue by referencing products that were used in the demo.

Telephony Integration

Programmed Telephony
- **Interactive Voice Response (IVR)**
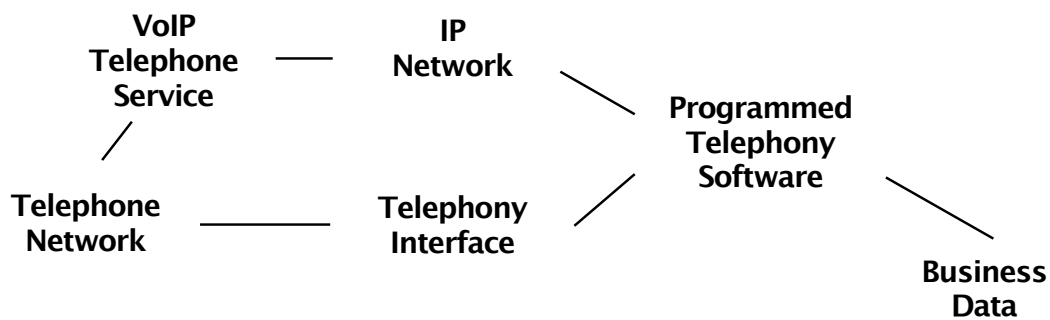- **Call routing**
- **Providing Self-Service**
- **VoiceMail**

Screen-based Telephony
- **Desktop call manager**
- **Integration with desktop applications**

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Telephony Integration

Programmed Telephony
- **Can be hosted anywhere**
- **Use VoIP or conventional telephone service**

**VoIP
Telephone
Service**

**IP
Network**

**Programmed
Telephony
Software**

**Telephone
Network**

**Telephony
Interface**

**Business
Data**

Telephony Integration

Screen-based Telephony

● **Direct-connect or client-server**

● **Layered solutions using low-level APIs and Apple Events**

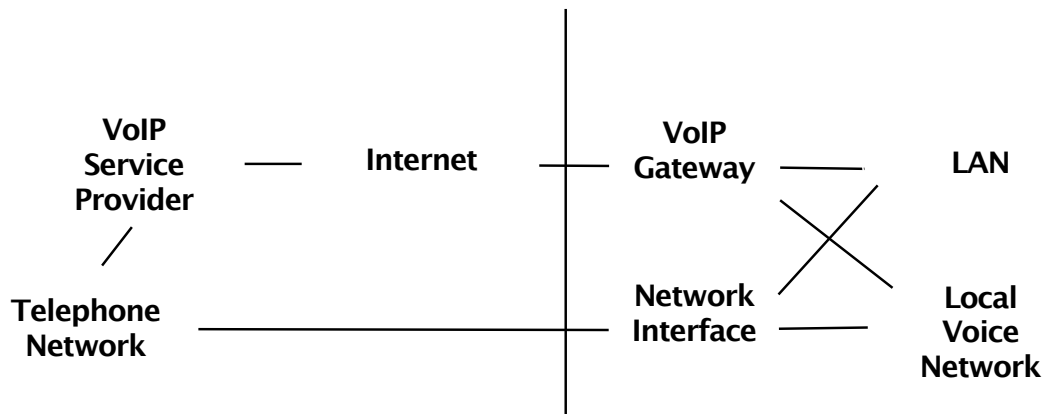| Telephony- Aware Applications	Scriptable/ Attachable Applications

SBT Application

Telephony Interface

Telephony Integration

Conventional vs VoIP

- **Trunking**
- **Local Voice Network**

VoIP Service Provider — Internet — VoIP Gateway — LAN

Telephone Network — Network Interface — Local Voice Network

Telephony Integration

Voice Mail

- **Programmed Telephony applications support recording messages**
- **Voice messages can be delivered to an email box or kept for retrieval by telephone**

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Telephony Integration

Multi-Location Scenarios
Tele-Commuters
Mobile Workers

I'll talk about the advantages to having a single number rather than giving out home and mobile numbers.

I'll talk about some of the implementation strategies for these scenarios.

Telephony Integration

Picking the right solution

- **Careful analysis of business communication patterns and workflow determine priorities**

- **User Interface is the key to selecting screen-based telephony application**

- **Programmed telephony tools may require professional configuration**

- **Configuration may be determined by service availability and cost**

Instant Messaging & Conferencing

I'll do a demo at this point that illustrates business uses of Instant Messaging and Conferencing with iChat. I'll segue by referencing products that were used in the demo.

IM & Conferencing Integration

Instant Messaging Technology
- **Presence Information**
  - **Location (known to network)**
  - **Availability**
  - **Status**
- **Text Chat**
- **Media Streams (Files, Audio, Video)**

IM & Conferencing Integration

Business Benefits
- **In/Out board and availability monitor**
- **End telephone tag & email ping-pong**
- **Intercom**
- **Unify staff in different locations**
- **Reduce travel expenses**
- **Collaborate with customers**

IM & Conferencing Integration

Picking the right solution
- **iChat does the job**
- **Use Mac OS X Server for privacy**
- **New iMacs with integrated cameras**
- **Integrate iChat-aware applications**
- **Serious limitations for wide-area networking due to protocols used and their ability to traverse firewalls**

Mail Integration

I'm assuming everyone is familiar with using email as a personal productivity tool.

I'll do a demo at this point that illustrates Mail integration -- both email and postal mail -- doing mail merge, using Address Book, . I'll segway by referencing products that were used in the demo.

Mail Integration

Mail is store-and-forward

Email vs Postal Mail

- **Addressing**
- **"Mail Merge"**
- **Printing/Labeling/Postage**

Mail Integration

Incoming Email
- **POP vs IMAP**
- **Mail Rules**

Mail Integration

Picking the right solution

- **Analyze workflow for non-realtime communication**

- **Switch from postal mail to email where possible**

- **Individualize all mailings with databases and scripts**

Fax Integration

I'll do a brief demo of incoming and outgoing fax.

Fax Integration

Fax is still an essential communications medium for many business transactions

…But you shouldn't need a fax machine anymore

Fax Integration

Incoming fax
- **Dedicated number or single number**
- **Hosted fax or local fax modem**
- **Automated fax handling**

Fax Integration

Outgoing fax
- **Scan documents**
- **Send fax from any application**
- **Automated fax sending**

Fax Integration

Picking the right solution

- **Analyze workflow for fax requirements**
- **Weigh pros/cons of hosted fax**
- **Determine if Apple's Fax software is sufficient**
- **Beware of Fax-over-Voice-over-IP**

Web Application Integration

I'm assuming that everyone understands the way that the web works.

I'll do a demo at this point that illustrates business uses of simple web applications that augment internal and external collaboration. Mac OS X blogs, Filemaker dynamic pages, facilities management.

Web-Based Communication

Communication and Collaboration via Web Servers

- **HTTP/HTTPS protocol**
- **HTML and XML documents**

Web-Based Communication

Other ways to use your web server
- **Customer-specific pages**
- **Posting documents**
- **Shared calendar**
- **Shared access to specialized applications**
- **Blogs**

Web-Based Communication

Picking the right solution
- **Personal, local, or hosted server**
- **Pay careful attention to security**
- **Off-the-shelf tools vs custom code**

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Other Collaborative Applications

If time allows I'll demo iCal publish/subscribe/invitations and/or ARD.

Summary

Summary

Analyze Business Workflow

Pick critical business applications

Pick communications & collaboration solution components

Integrate the solution

Summary

Analyze Business Workflow
- **Identify mission critical information**
- **Identify internal/external communication paths and channels**

Pick critical business applications

Pick communications & collaboration solution components

Integrate the solution

Summary

Analyze Business Workflow

Pick critical business applications

- **Mission critical applications that reflect information requirenents**

- **Support for AppleScript/Automator/ Standard protocols and APIs**

Pick communications & collaboration solution components

Integrate the solution

Summary

Analyze Business Workflow

Pick critical business applications

Pick communications & collaboration solution components

- **Prioritize based on workflow**
- **Allow for individual preferences**
- **Consider application integration and infrastructure limitations**

Integrate the solution

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Summary

Analyze Business Workflow

Pick critical business applications

Pick communications & collaboration solution components

Integrate the solution

- **Utilize AppleScript and Automator**
- **Proceed in stages and test thoroughly**
- **Consider professional assistance**

Overview

Small Business Checklist
Office Infrastructure
Servers & Network Services
Business Communication and Collaboration
Business Management Solutions
Technology Management

Business Management Solutions

Every business has "mission critical" data
Every business has financial and customer data
What applications are available?
Off the shelf or custom?

Generally speaking, most businesses have a flow, a workflow. Work is acquired, work progresses, work is annotated, client interaction is recorded and eventually the work product is complete and final record-keeping and archiving takes place.

Product Categories

Point of Sale
Customer Relationship Management (CRM)
Contact Management
Inventory
Accounting
Asset Managment
Project Management
Office Suites

Generally speaking these represent some of the most common areas in which off the shelf packages can really shine, or work for most businesses with minor customization. Most of these will represent a significant outlay of cash, so it's important to consider how well they answer your business' needs. Under the best of circumstances we hope for a 90/10 solution in which an off the shelf product can satisfy 90% of the needs.

Point of Sale

POS/IM
Ensign

Some potential choices available for the Macintosh.

Customer Relationship Management

Now Up-to-Date/Contact

Daylite

Compatibility with ACT!

Palm Desktop

FileMaker Solutions

- **Business Tracker**
- **Creative Pro Starter Kit**
- **Recruiter**

SalesForce (hosted solution)

Each of these programs have their strengths (and weaknesses). It's important to understand what they offer and how they can help you. Try to find a product that fits your workflow rather than trying to change your entire workflow to match a product.

Accounting

Quickbooks
MYOB AccountEdge/First Edge
Genesis
Absolute Accounting
AccPac
iBiz
Billings
Clients & Profits
Timeslips

Some potential choices available for the Macintosh.

Often, the choice of these systems are dictated by your accountant or bookkeeper. While QuickBooks Pro has been the reining champ for years, MYOB has two products that are worthy competitors. Plus, they'll give your accountant a free copy!

Digital Asset Management

Version Cue
Portfolio
Cumulus

Some potential choices available for the Macintosh.

If you have to organize large quantities of digital assets, these applications are powerful tools, allowing you to organize and search by multiple keywords and categories. If you have a workgroup that needs access to these assets, server versions are available.

Font Management

Font Agent Pro

Font Doctor

Mac OS X Server

Font Reserve/Server

Suitcase/Server

- **When does a server-based solution make sense for your business?**

Some potential choices available for the Macintosh. Some of these products verify the integrity of fonts. Others are font management tools that work on single user machines or with workgroups.

Purge that collection of fonts from who-knows-where of the incomplete, duplicate, corrupt and damaged fonts, and replace your mission-critical type with fresh, new copies.

Once you've got a clean collection, make sure your designers are all using the same set, and burn a copy of your new master set to CD.

Font management in creative environments has always been a chore, but in OS X it's downright essential. Making sure your creative team is using the same clean, uncorrupted set of fonts can save hours of time and trouble. While Font Book is included with OS X for casual users, it really isn't a professional-grade tool for font management in workgroups.

Project Management

FastTrack Schedule
Notebook
Omnigraffle
SubEthaEdit
iChatAV as a management tool

Some potential choices available for the Macintosh.

Windows Compatibility

File formats

File names

DAVE

ADmit Mac

XML support in MS Office

VB for Windows can't play with Macs

Virtual PC

Windows Terminal Services

Depending on the focus of your work, working with the dark side can be relevant. You may need either casual integration; simple e-mail, office documents, databases, etc. or you may need access to an Exchange server or Active Directory, finally you may need deeper integration to the point where PC services are only available from a PC, Virtual PC or even Windows Terminal Services. Whichever it is, the odds are in your favor that a solution already exists.

One important fact to be aware of: the file formats of Word, Excel and PowerPoint have been identical for Macs and Windows since Office '98 on Macintosh and Office 97 on Windows.

Handheld Support

Palm/Treo

- **Sync to Address Book/iCal, Entourage, Now UTD/C**
- **Documents to Go**
- **Quicken**
- **FileMaker**
- **Missing Sync**
- **Password applications**
- **PDA Defense**

There is viable support on handheld devices for many of the applications you find critical in the office. Regardless of the data you wish to take with you, keep in mind the value of that data if the handheld is lost or stolen.

Handheld Support

Blackberry

- **PocketMac**
- **Still requires Windows Enterprise server for "push" email.**

Custom Solutions

When do you need a custom solution?
- **Custom workflow**
- **Custom database**

Cost of custom software development
- **Decreasing need for redundancy**
- **Increasing productivity and speed**

Custom solutions are generally more expensive than anything purchased off-the-shelf, but they offer a solution completely tailored to your business. Traditionally the construction of a custom solution will involve a surprisingly detailed dissection (some would say vivisection) of your business. Done properly, this will be a unique opportunity to learn how your business really works. If choosing a custom solution be certain to research your partner and see previous examples of their work. Plan for future development, as there will be a version 2 and 3... Finally, two additional considerations are who owns the solution and what happens if your developer is hit by a bus. Make arrangements in advance for both eventualities.

Overview

Small Business Checklist

Office Infrastructure

Servers & Network Services

Business Communication and Collaboration

Business Management Solutions

Desktop & Technology Management

Finally! You've got your entire enterprise under control. Network, Power, Servers, Collaboration & Communication, Management, but... We're down to the REAL source of your problems, your users!

Technology Management

How to setup manageable desktop environments

Use cool tools for Mac OS X

Some things (electical, phones, etc.) may be beyond your control

Reduce workload and increase efficiency

Fortunately we have some terrific ideas for how you can save time, effort and money in the management of desktop computers. Your overall goal is to reap the benefits of standardization and top-level planning.

Technology Management

Software Licensing
- **Getting legal**
- **Record keeping**

Making desktop images

Rolling out new computers

Keeping up to date

Planning for obsolescence

Basic Troubleshooting

Managing the desktop is often overlooked, but typical prep time for a new machine can exceed five hours depending on the tasks the machine will be put to. The most important step is to standardize your installs, create an image that collects your office workflow applications and configurations and reduces the prep time to about 10 minutes.

After the initial install it's important to develop strategies for upgrades, aging, and troubleshooting.

Finally, plan for emergencies. Consider keeping a spare machine ready for use.

What Machines to Use?

It's up to you!

Your mobile needs

Your budget

Long term planning

Value equation

CRT vs. LCD cost savings

General equation for costs for maintenance and scheduled replacement for a graphics workstation is about $1800 per year. This number includes scheduled hardware replacement after 2.5 to 3 years, software upgrades and misc. small application updates, etc. This assumes an existing workstation at the beginning of its life already in place.

Volume Licenses

Usually minimum

Often available when upgrading

Mac OS X

MS Office

FileMaker Pro

Adobe Creative Suite

Quark XPress

Volume licensing offers significant advantages for a business environment, especially in two areas, first, it makes the use of images simpler and second it allows a business to schedule software upgrade expenses as planned for budgetary items. Although it varies from company to comapny, generally speaking, you'll need 5-10 seats or more to qualify for a VLA.

Creating a Standard Desktop

Make a master

Create an Administrative Account

- **Not "admin"**

Setup your printers

Install your applications

User Templates

Networking

Application Configuration

The best way to begin the creation of an image is to set up a machine for your environment. Install the latest, most upgraded software, configure the machine and applications for use on your network and test everything.

Creating a Standard Desktop

Configuring plists

● **iTunes streaming, dock location, dock size, dock contents, mail settings, etc.**

Consider creating images by department function or by machine type

It's possible to configure the environment a new user encounters in your office when added to a machine. Consider including templates and needed office documents and resources.

Finally, it might be best to create more than one image for use at your company.

Creating & Deploying the Image

Carbon Copy Cloner
Disk Utility
Firewire Drives
System Image Utility
NetBoot
NetRestore

Software to assist in creation and distribution of images

Handheld Support

Policies
Security
Web access to data
Data Entry

Handheld devices are often seen as being outside the control of an IT department, but this is dangerous thinking. While the cost of a handheld is often so low that an employee can buy one themselves or receive one as a gift the reality is that once connected to a company computer they can potentially sync the assets of a company and then calmly walk out the door.

Establish criteria for what employees may and may not do with handhelds. If trust is low it's possible to monitor your networked computers for the presence of syncing software.

Much of this thinking applies to USB thumb drives, FireWire drives, etc.

Essential Utilities

QuickSilver
AppleJack
Cocktail
Safari Enhancer
Desktop Manager
Textpander
Paparazzi
PrintWindow

There are a wide variety of shareware of freeware applications that can really enhance the use of a Mac. These are a few of our favorites and site licenses are usually very reasonable.

Fun Applications

Comic Life
The Print Shop

It's important to foster a sense of fun once in a while at the office to help motivate workers and to enhance a team building atmosphere. These applications can help do that.

Technology Management

Management is key!
What is IT's impact on your strategies?
What are your strategies' impact on IT?

Think about the relationship of strategic business decisions your company is making on IT and IT's strategies that can impact your business. In short, consider the IT impact of all decisions. In some instances the answers to difficult business decisions may already be within reach of an IT solution. Office space at a premium? Maybe some workers should be remote workers.

Technology Management

Training
Documentation
Defining Responsibilities
Security
Regulatory Issues
Future Directions

This is not just a CYA slide, it's an invitation to consider what kind of an environment your business wants to foster.

What's the answer?

101010

Binary

What's the answer?

2A

Hexadecimel

What's the answer?

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42, an easy answer in The Hitchhiker's Guide To The Galaxy, but here the point is that the answer will be unique to your organization.

Think Strategically

Purchases and policies impact businesses at many levels

Competitive advantages of well-planned IT infrastructures

If you've put in the work already, then your annual IT review is just that, instead of an attempt to gather together all the loose ends.

Data

Information is organized data
Information is power
Who owns it?
Email
Chat Logs
Custom Software

A lot of new and disparate information is becoming part of your business. What do you want to track and how do you want to track it? What do you want to retain?

Business or Industry Requirements

Basic infrastructure is similar business to business

Individual requirements can vary

What's specific about YOUR business?

- **Law firm**
- **Design firm**
- **Vertical markets — specific needs**
- **Auditing requirements**

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Take the time to evaluate what is unique about your business and what impact it has on your IT needs. Further that information should be recorded and considered in future decisions.

Regulatory Issues

Regulations or compliance issues in your industry

- **HIPAA**
- **Sarbanes/Oxley**
- **Business/Industry specific**

Your business may have specific regulatory requirements and these can have a massive impact on how you do IT. Note that much of this is still not fully understood and the likelihood is that you are not qualified to read and interpret the impact of much of this legislation. Consider bringing in a specialist for this kind of work, while at the same time understanding that some of this legislation may color every IT activity of your business.

Managing Servers and Desktops

Update management
Apple Remote Desktop

Not every update should be applied on the day it's released. You may want to test internally first, or at minimum watch for news on the Mac news sites.

However, when it is time to apply updates ARD can ease the process tremendously.

Plan & Implement Policies

Use Policies

Responsibility for user actions

File sharing/swapping

iTunes radio listening/bandwidth

Port blocking/firewall

IP tracking/logging/filtering

Conveying internal knowledge

Documentation

It is far better to address these issues in advance of need.

Education Policies

Training
Books, company library
Self-paced video training (online or disc)
Leader-led classroom training
One-on-one training

An educated worker is a more efficient worker. It's astounding how many companies don't invest in education for their employees. Which method is best for your organization is up to you.

Maintenance Policies

Preventative maintenance
Upgrade policies for hardware
Upgrade policies for software
Repair policies

Most of this is clear, however, note that it may be smart to ensure that a spare machine should be of lower class than the machine that is being repaired or the user may want to keep the spare! Or, it may be wise to use the same machine for each class of user so the spare can be left as the new machine to only disturb a user once.

Troubleshooting

Do it yourself?
How much time do you spend?
Why?
When to call?
Who to call?

In many cases with small businesses it makes sense to have an outside tech to deal with your IT needs because the company can avoid many of the costs of an employee. Additionally there may be knowledge advantages from an outside source over a dedicated internal source. But we're biased!

Planning for Obsolescence

Machines cycle through the office by class
Eventual role may be as light duty servers
Final transition may be to charity

In the same way that we plan for cycling in new machines and make it part of the budget we also plan for the end of the life cycle of machines. If they will go to charity you may want to find the right charity in advance and address any requirements they may have.

Overview

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Office Infrastructure

Summary

Costs
ROI
Planning
Responsibilities
Security
Mobile management

Summary

Ergonomics
Implementation strategies
Documentation
Training
On-site support
Outsourcing

Thank You!