

Introduction

"Doing Business Remotely" is fundamentally about how certain new technologies are moving away from being regarded as "new toys," and are instead being acknowledged as a part of normal business practice. This book is not like many books about e-commerce – i.e., doing business online, selling products online – it is about determining how you can best use the various technologies to virtually enable your business, whatever that business may be.

It is about all the aspects of operating virtually, as opposed to face-to-face. Operating virtually ranges from totally online business consortiums, where the product is an online service, to a company that provides a physical product while using telecommuting for both product and business management. What we are focusing on is how the business runs when those who run the business telecommute¹.

Our goal is to introduce the broader concepts of remote operations rather than creating a how-to guide for any specific technologies or practices. Specifics will be addressed in later volumes.

Employers and employees find themselves, now more than ever, with a staggering array of work time options and opportunities. We invite you to use our research to discover your options, maximize your efficiency and productivity, and face any challenge with ready solutions.

Enjoy, learn with us, and let us know your thoughts and opinions at remotely@tnrglobal.com.

¹ See Appendix A for Hindsight about Telecommuting Development

Chapter 1: Characteristics of a Virtual Company

Advanced Methods of Communicating

Whether a given virtual company retains a centralized office or not, it shares an attribute common among all business with remote operations: **virtual companies aggressively promote and enforce the use of current, enterprise-level technologies to communicate with employees and customers in remote locations.** These technologies include, but are not limited to: project and task management tools; intranets; web-based calendars; file sharing applications; remote-desktop applications, and telecommunications software such as IM/chat, email, video-conferencing, and VoIP.

Benefits¹

- **Improved capability to retain workers** – ability to retain employees if spouse or family is relocated out of area; capacity to accommodate a valued employee with a disability, personal or family illness, or those on extended leave because of childbirth or adoption.
- **Improved work-life balance** - stress reduction as a result of doing away with strictly structured work patterns; increased control by employee of work environment; opportunity for more family time; improved overall employee morale; removal of the stresses and dangers associated with commuting.
- **Improved competitiveness** – increases in individual and organizational productivity; enhanced governmental service level efficiency.

¹ Source: "What is the Difference Between Telework and Telecommuting?", The Telework Coalition, February 23, 2006, <http://www.telcoa.org/id193.htm>

- **Real estate cost savings** – by avoiding additional construction costs or increased lease costs; avoiding relocation to accommodate business growth; or by becoming a 100% virtual organization.
- **Reduced absenteeism** – maternity and medical leave can be diminished, since working from home does not always require total recovery; unexcused time taken off to deal with personal and domestic day-to-day events such as family emergencies and household repairs can be minimized; lost time can be made up.
- **Brings employment to underemployed segments of the population** – retirees; the disabled; geographically remote workers; economically blighted areas; military or industry closure.
- **Reduction of mobile toxic gas emissions** – in addition to abatement of pollution runoff into waterways and the preservation of limited natural resources (oil) and green open space.

Challenges

- **Resistance, usually from middle management**, to change to the new ways of working required to control remotely located workers. A telework program requires “Results Oriented Management” rather than “Line of Sight Management.” Managers need to overcome telework myths such as “Out of sight means out of control!”
- **Adoption of new technologies can result in resistance to change.** This is especially prevalent when training is not provided to keep employees' technology skills current. Not providing adequate technical support has been identified as one of the main reasons that telework programs fail.

- **Managers often object to the adoption of telework strategies,**
because they fear that data security measures, procedures, and sanctions for non-compliance can not easily be replicated outside the main office environment.
- **Exposure to charges of inequity** in the selection process of employees chosen as teleworkers vs. those passed over to remain non-teleworkers. An inadequate selection process can expose employers to charges of discrimination, favoritism etc.

Chapter 2: Major Components

From federal, state, and local governments to small- and medium-sized businesses and large corporations, telework has been recognized as an effective way to:

- Reduce business costs
- Increase staff productivity
- Reduce consumption of energy resources
- Decrease lost work time and
- Recognize employees' request for more work-life balance.

The **three major components** that enable a virtual company to do business are **People, Telecommunication Tools and Devices**, and Other **Hardware**. Each piece is explained below.

People

The success of a virtual company will depend, first and foremost, on the morale of its employees. At the core of every remotely operated business is its motivated, task-oriented, and qualified team.

Typical traits of a successful remote-office worker are:

- Ability to self-motivate
- Advanced communication skills, and
- Demonstrated ability, achievement, and/or accomplishment in job performance.

Given the opportunity to work on their own schedules many teleworkers work harder, and work for longer hours, than their office-bound counterparts,

Who need not apply? Those who prefer supervised work and those who require a large amount of social interaction may not be suited for telework as that type of employee may quickly become depressed and dissatisfied with the remote-work experience.

Common Tele-Professions

In general, roles that are best suited to teleworking have the following characteristics²:

- ☐ Clear objectives
- ☐ Work can be performed independently
- ☐ Little or need for supervision
- ☐ A high degree of information processing
- ☐ Able to incorporate technology in work process.

Jobs Suitable for Telecommuting³:

- **IT Staff** – Systems Analyst, Software Programmers, Web Design
- **Finance Professionals** – Accountants, Auditors, Finance Brokers
- **Public Relations Consultants** – Event Management, Promotional Professionals
- **Administration & Support Staff** – Book-keeping, Data Input and Word Processing, Customer Services, Researches, Writers
- **Sales** – Reservations, Customer Support, Telemarketing.

Jobs Inappropriate for Telework:

Despite all advances in technology, some jobs will not be appropriate for telework². These may include (where applicable):

- ☐ Jobs involving direct interaction with the public
- ☐ Manufacturing companies
- ☐ Hands-on roles

² Source: Crandall (2005), Trembalay (2002)

³ Source: McDonald (2004)

Communication Tools/ Integrated Information Systems

There are increasingly more options to help virtual companies stay securely connected with teleworkers. The categories of these tools are listed below. (A detailed discussion of commercially available software and custom software for the virtual company appears later in this document.)

Telecommunication Tools by Category:

- Intranet/Portal
- Project Management
- Document Sharing
- Learning/Education
- Time Tracking and Task Management
- Messaging/Communication (IM, Email, Voice)
- Desktop Sharing/Remote Access
- Payroll/Accounting

Hardware

As swiftly as software versions are updated, hardware becomes out-of-date and/or obsolete; the minimum hardware requirements are therefore a moving target. Accordingly, below is a list of suggested telework accessories, but no hardware specifications:

Recommended:

Mobile Phone
Laptop Computer
Printer/FAX
Scanner/Copier
Wireless Router and Wireless
Network Card
CD/DVD Burner
Cordless Keyboard and Mouse

Also Consider:

Computer Microphone
Additional Monitor
Computer Video Camera
Cordless Phone/Speaker Phone
Phone Headset/Microphone Headset
Backup Laptop Battery
Flash Memory Drive (Portable Memory)

Ergonomics

Ergonomics, the scientific study of human/tool interaction, has been described as “the application of information about human characteristics to design applications, e.g. equipment, tools, work tasks – with the aim of improving safety and efficiency”⁴.

In discussions about hardware, ergonomics are often overlooked – but virtual companies and their employees will find that as much as hardware matters, the appropriate design and “fit” of the hardware is extremely important as well.

“The reporting of **cumulative trauma disorders** (CTD) and other work-related disorders because of ergonomic hazards has increased significantly. Computer technologies and new equipment often expose employees to increased repetitive motion and other ergonomic risk factors.”⁵

According to the Bureau of Labor Statistics, disorders associated with repeated trauma account for about 60% of all occupational illnesses.⁶ Of those CTD cases, those involving carpal tunnel syndrome are most prevalent.

Carpal tunnel syndrome is a condition that affects the wrist and hand. Its symptoms include sensations of numbness, tingling, and pain. While small parts assembly and other manufacturing industry job environments (sewing, finishing) are the most likely scenarios in which carpal tunnel syndrome occurs, a significant number of office workers complain of carpal tunnel-like pain.

While CTD and carpal tunnel issues are primarily **keyboard/typing**-related, other factors also figure into the structure of a well-organized office that uses the principles of ergonomics to reduce physical stress on the worker.

⁴ Source: “Ergonomics”, Health and Safety Terms, EDP HS&E Consultants, March 2006, <http://www.edp-uk.com/glossaries/terms.htm>

⁵ Source: “Don’t underestimate the importance of ergonomics”, HCPro, February 2006, <http://www.hcpro.com/content/55593.cfm>

⁶ Source: “Carpal Tunnel Syndrome, NIOSH Facts, Center for Disease Control and Prevention, June 1997, <http://www.cdc.gov/niosh/ctsfs.html>

- ☐ **Lighting** (i.e., “task lighting”)
- ☐ **Furniture**, such as chairs and desks
- ☐ **Monitor** height and glare factor

Employers can protect themselves and their employees from time lost due to cumulative trauma injury by promoting ergonomic principles to reduce or relieve awkward hand positions and repetitive movement, and by providing access to ergonomic tools and training. When in doubt, there are consultants who specialize in home-office ergonomic training services.

A note about **OSHA** (Occupational Safety and Health Administration, a part of the Department of Labor): OSHA does not govern the officespace of teleworkers⁷.

⁷ Source: “Home-Based Worksites – DIR # CPL 2-0.125”, OSHA Instruction, US Dept of Labor, February 2005,
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=2254

Chapter 3: Priorities and Choices

Registrations and Regulations

There are no specific federal or state regulations that dictate to commercial employers how to operate telecommuting and/or telework programs. This can be attributed to the fact that business and human resource laws in the United States are typically pro-business rather than pro-employee, and government mandates would most likely make telework programs and policies more restrictive and costly to employers. Organizations such as Telcoa⁸ have formed in order to lobby the federal government on behalf of corporate telecommuting interests. Still, understanding and following all existing laws and directives in order to be in compliance with regulations is essential. Moreover, good standing with government agencies may be a requirement for winning some contracts.

In addition to business law compliance, **the most important thing virtual companies can do to succeed is to establish programs that enable employees to be a part of the policy-making process** and take an active role in determining the directives outlined in remote work agreements. This strategy will help ensure ready adoption of company regulations and enable the successful growth of the company.

Insurance

As in case with off-line operations, companies doing business remotely need to consider applying for different kinds of insurance to protect themselves from unforeseen adverse business condition. Some legal issues to consider are:

- ☐ tax or insurance filing for multiple locations
- ☐ union or group membership laws and statutes.

⁸ Source: "Federal, State, & Regional News, Legislation, and Programs", The Telework Coalition, <http://www.telcoa.org/id35.htm>

Workers' Compensation Insurance (WCI) is required for all remote employees just as in the case with office workers. WCI covers injuries and occupational diseases picked up at work. Employers are liable even if the employee may have contributed to the injury or illness. It's required in every state except Texas, and specifics vary from state to state. WCI will cover injuries workers may have as a result of unsafe home-office environment. It is recommended to make your insurance provider aware of remote employees and the fact that they work from homes.

Errors and omissions insurance is recommended to cover the company in the case of unexpected circumstances. **Workers' compensation insurance** for virtual companies is required as it is with any business – and all the usual regulations for worker's compensation are also applicable.

Site Inspections

Although no government entity has the right to inspect home or remote office space, customers and clients may want to visit and/or inspect the location of distributed support and sales personnel. It may therefore be appropriate to prepare a company statement regarding the employment of teleworkers that is suitable for public viewing.

This distributed workforce statement could be published on a corporate website and/or be available on the intranet for employee reference, as well as in printed form for distribution. Some organizations highlight the fact that they are a virtual company, adding this to their marketing materials as a potential benefit to the customer.

Regarding government-regulation of home offices and federal site-inspections⁹:

- ☐ OSHA will not conduct inspections of employees' home offices.
- ☐ OSHA will not hold employers liable for employees' home offices, and does not expect employers to inspect the home offices of their employees.
- ☐ If OSHA receives a complaint about a home office, the complainant will be advised of OSHA's policy.
- ☐ If an employee makes a specific request, OSHA may informally let employers know of complaints about home office conditions, but will not follow-up with the employer or employee.

Employees vs. Contractors

An early decision should be made about running a virtual company with a support and administrative base of either (primarily) employees or contractors. There are numerous arguments supporting the pros and cons of both arrangements. It is important to note that some state laws enforce stricter contractor classification standards than the federal government, and filing and other requirements may change as a result of these standards.

In some cases, **companies may have no choice but to hire would-be contractors as employees.** In fact, a new Massachusetts state law¹⁰ applies a very restrictive test to the normal IRS twenty-factor test for determining independent contractor (1099) filing status. The statute provides that in order to be considered an independent contractor the following specifications must apply:

⁹ Source: "IX-Policy for Home Offices", "Home-Based Worksites -- DIR # CPL 2-0.125", OSHA Instruction, US Dept of Labor, February 2005, http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=2254

¹⁰ Source: "Labor and Employment Alert", Goodwin Procter, March 30, 2005, http://www.goodwinprocter.com/publications/LE_IndContractors_3_30_05.pdf

1. the person must be free from control and direction in connection with the performance of the service, both under (his) contract... and in fact;
2. the service be performed outside the usual course of the business of the employer; and
3. the individual must be customarily engaged in an independent occupation, profession or business of the same nature as that involved in the service performed

As the debate between the engagement of a contractor vs. employee continues, a new breed of consultant, called the virtual assistant, has emerged. Virtual assistants (VA's) can take on a number of tasks, from web site design and maintenance to accounting and secretarial duties. VA's can often be sub-contracted via an employment agency, relieving an employer of the tax or insurance-related filing concerns that may follow the hire of a traditional contractor.

Intellectual Property, Copyrights, & Non-disclosure Agreements

The issue of intellectual property will come to the forefront in any industry where new ideas are the norm and the next idea could be a major breakthrough, spurring the growth of a new product or revenue stream. In the case of the virtual company, the company's ownership of these ideas, when brought forth by a distributed and remote workforce, may seem particularly tenuous if policies have not been put in place to define matters of intellectual ownership.

It is appropriate in any virtual company to require employees as well as contractors to sign non-disclosure and intellectual property agreements as applicable. This will help protect the rights of both the employer and employee in the event of a dispute. When in doubt about the creation or enforcement of such

an agreement consult a copyright lawyer or an attorney who specializes in intellectual property and e-commerce law.

Also related to the discussion of personal and company privacy and ownership issues is the challenge of email/IM privacy and rights involving an employees' use of personal equipment such as computers, phones, and other teleworking equipment. Specify in detail the company's stance on personal privacy and the use of personal equipment.

Physical Offices and Meeting Spaces

There are now businesses that cater to the workspace needs of teleworkers and the virtual company. In effect, these new companies aim to satisfy a market need to reduce the commuting time of suburban employees. These telework centers – often ideally situated near the “outer loop” of a city freeway – offer technical support and the most advanced tools in office technology, allowing teleworkers the best of both worlds; the ease of a short commute and the security of a managed office environment. At this time, telework centers are offered primarily in high-tech industry corridors such as northern California and the metro-Washington, DC area.

Other office space options for the virtual company include shared office space and live/work spaces such as converted warehouses.

Meeting space alternatives range from coffee shops and bookstore cafes to rooms in hotels (the practice of renting hotel rooms for business meetings is so prevalent it has garnered a new name: “hoteling”), private homes, theaters, apartment buildings, banquet halls, and community & civic centers. In some areas, venue consortiums and other organizations collaborate to advertise rates and reservation information for meeting space use.

The best locations will offer:

- ☐ Quiet
- ☐ High-speed internet access with wi-fi
- ☐ Restrooms
- ☐ Food & beverage service
- ☐ A/V equipment to rent (and/or space to setup your own)
- ☐ Adequate power sources
- ☐ Tables/desks and comfortable seating
- ☐ Natural light
- ☐ Good ventilation.

Chapter 4: Personnel Management

Oversight and Authority

Virtual companies that employ staff who work from home or other off-site environments may face unique challenges when seeking to carry-out traditional management tasks, such as regularly monitoring performance, providing as-needed professional training, rewarding high productivity, and ensuring retention of staff through proper handling of complaints and infractions.

Other companies seeking to implement a telecommuting program will find that the policies and procedures in place describing the management of typical office employees are not sufficient to meet the unique organizational considerations presented by the use of remote staff.

Results-oriented management, ideally suited to telework, rather than line-of-sight management – the traditional management style, will become the new organizational culture.¹

For these reasons, it is particularly advisable that virtual companies consider putting into place comprehensive telecommuting and telework personnel policies distinct from its standard operations manual.

These policies should be easily accessible by telestaff (and potential telestaff) and should clearly define the company's expectations of its remote workers, clarifying guidelines for:

- ☐ Timekeeping
- ☐ Work schedule
- ☐ Information security
- ☐ Work location guidelines

These guidelines should also outline the company's agreed upon obligations to teleworking employees, noting practices regarding compensation and benefits, use of employee leave, and company-owned equipment.

Employers should strongly consider developing a remote employee work agreement, which further specifies applicable policies, and which may include a description of equipment and/or software issued to the employee for the purpose of remote work, or an account regarding the authorized alternate work location(s). This agreement should be signed by both employer and employee as a legally binding contract.

Well-planned, comprehensive policies can be key in helping a virtual company – or a company that supports some virtual operations – avoid the common communication pitfalls which can be more prevalent in a distributed workforce than in traditional office environments.

Incentives and Morale Building

Because home or remote-office based employees have, to a degree, achieved one of the chief desires of professional workers – a more flexible schedule – they are more likely to report greater job satisfaction than their office-based colleagues. At the same time, teleworkers will lack opportunities to bond with others in the company, and may be less inclined to identify with a corporate identity or culture than traditional office employees.

As studies have shown, employees who do not form close relationships at work are not easily retained. Similarly, employees who do not “buy into” the company mission or philosophy are not likely to grow professionally and can experience low morale.

Virtual companies can enhance relationships with remote employees by maintaining frequent communication with off-site staff via a variety of available telecommunication technologies. They might also extend invitations to programs

which benefit both employee and employer, providing teleworkers with the opportunity to mingle with colleagues and other professionals while representing the company. These programs could include educational opportunities such as workshops, lectures, and conferences, or corporate-sponsored memberships in job or industry-related associations and groups.

Finally, virtual companies should arrange face-to-face meetings regularly – at the very least quarterly, but more ideally monthly or even more frequently – in order to connect with managers and staff members, and to experience the corporate culture. Collaboration, fun, and satisfaction should be the emphases in these gatherings.

Coordination and Project Management

The typical virtual team will have the need, as does its physical office-based counterpart, to collaborate on any number of projects – from small to large, and from short-term to long-range – during its business cycle. Given the variety of tools available to help facilitate the remote management of projects, it is best to leave the choice of utility to each virtual company, so that it can find a match suitable to its particular needs.

However, if general “ground rules” in remote project management exist, they would include these two guiding principles:

1. Keep non-work related chat, or IM, to a minimum throughout the production/execution stages of a project.
2. Employ a set of applications supporting project management and documentation and knowledge sharing.

Chapter 5: Specific Tools

Commercially Available Software

The recent adoption of telework as a viable alternative to the traditional workplace has been punctuated by a solid software industry response to the growing need for sophisticated remote access and telecommunication and collaboration tools. Within the last 5 years all of the top software companies in the world have developed software marketed specifically to address the needs of virtual companies and teleworkers. The software often claims to provide a solution to common virtual company challenges such as scheduling/staff time management, project task tracking, file and/or network security, or mixed platform compatibility. Many smaller companies have also released "just-in-time" remote-access systems.

The most widely used and essential tools of the virtual office are:

- ☐ Email/ Web-based email
- ☐ Chat
- ☐ VoIP
- ☐ Online groupware (on-line collaboration and meetings software)
- ☐ On-line databases and document storage.

These tools are discussed in depth later in this document. It is important to note that continued advances in the area of telecommunication necessitate regular review and upgrade of adopted utilities.

Commercial Software vs Custom Build

Custom software solutions have been available to consumers since software was first introduced into the marketplace. Providers range from individual engineers and programmers to global corporations and companies. Developers have thus sought to provide for the virtual company the ability to design their own solutions, be it on a small- to medium-sized scale or an enterprise-level system.

Typically, a custom software system is developed because no “off-the-shelf” system meets the unique requirements of the customer. The customer may be moderately pleased with an existing commercial system and call for slight modifications to that solution, or may seek additional functionality in the form of integrated modules, etc., or may request the design and development of a completely new system. Virtual companies may be a good market for a customized management system, as the success of this kind of enterprise is so closely tied to its integration of current technology.

Open source solutions have increased the potential for consumers to attain affordable customized software. Besides adding to the pool of available systems, open source software often allows for more integration with other systems and future expansion possibilities than its proprietary and commercial counterparts.

To choose the correct enterprise level software, be it commercially available or “build-to-suit”, it may be worthwhile to enlist the help of a knowledgeable technical consultant. There are a number of consultants whose business is devoted solely to supporting the virtual company and telework.

Specific Tools - Email

Email is not a new technology; in the 1960's and 1970's, early email programs were created to send messages from one person to another, but the exchange was limited in that the messages were restricted to people using a single compute ¹¹.

“As is often the case, more than one person at the same time noticed that it was a natural use of a new technology to extend human communications.”¹¹

¹¹ Source: Dave Crocker, “Email History”, The Living Internet, March 2006, <http://www.livinginternet.com/e/ei.htm>

By the early 1980's, email had taken on more or less the form used today. The beginning of the 90's saw network service providers like AOL connect their internet services to the internet, making internet email a global standard.

As an emerging global standard, **email is an ideal vehicle for marketing pieces like newsletters and whitepapers, and for opt-in discussion lists, or other subscription services.** Virtual companies can develop and publish a full suite of brochures and pamphlets, leaflets and postcards – without the need for a dedicated mailroom.

The most popular email applications are described below.

Email – Graphical Programs

Apple Mail

Mail (aka Mail.app) is an email program made by Apple Computer included in Mac OS X. Mail in its current form does not run on any operating system other than Mac OS X, however previous versions were included in NeXTSTEP and OPENSTEP¹².

<http://www.apple.com/macosx/features/mail>

Citadel

Citadel focuses on connecting communities of people together. The system is made up of containers called "rooms". A room may be used as an email folder, a discussion forum, a real-time chat, a mailing list, a calendar, an address book, an RSS sink¹³.

<http://www.citadel.org>

Eudora

Eudora is a widely used email client for the Microsoft Windows and Macintosh operating systems. It also supports several palmtop computing platforms, including Newton and the Palm OS¹⁴.

<http://www.eudora.com>

GroupWise

GroupWise is a workgroup application suite offering electronic mail and diary scheduling from Novell, Inc. It can operate on a number of server and

¹² Source: en.wikipedia.org/wiki/Apple_Mail

¹³ Source: <http://www.citadel.org/>

¹⁴ Source: [en.wikipedia.org/wiki/Eudora_\(email_client\)](http://en.wikipedia.org/wiki/Eudora_(email_client))

workstation platforms. Server platforms include NetWare, Linux, and Windows, while the client software can run on Windows or Linux¹⁵.
<http://www.novell.com/products/groupwise>

Lotus Notes

Lotus Notes is a proprietary, client-server collaborative software and email system owned by Lotus Software, of the IBM Software Group¹⁶.
<http://www-306.ibm.com/software/lotus>

Opera M2

Opera Mail is integrated with the Opera browser, and lets send, receive, sort and search e-mails.
<http://www.opera.com/products/desktop/m2>

Microsoft Entourage

Entourage is the Macintosh equivalent of Microsoft Outlook, developed by Microsoft Corporation. It currently combines an email client, calendar and 'project manager'. It is a personal information manager for Macintosh¹⁷.
<http://www.microsoft.com/mac/products/entourage2004/entourage2004.aspx?pid=entourage2004>

Microsoft Outlook

Microsoft Outlook is a personal information manager from Microsoft, and is part of the Microsoft Office¹⁸.
<http://office.microsoft.com/en-us/FX010857931033.aspx>

Microsoft Outlook Express

Microsoft Outlook Express is an email and news client bundled with operating systems and the Internet Explorer web browser by Microsoft, and also available as a no-charge download for the "classic" Apple Macintosh operating system (although not for the newer Mac OS X, where it has been replaced by Microsoft Entourage, which costs money as part of Microsoft Office)¹⁹.
<http://support.microsoft.com/ph/2578>

Mozilla Thunderbird

Mozilla Thunderbird is a free, cross-platform email and news client developed by the Mozilla Foundation. The project strategy is modeled after Mozilla Firefox, a project aimed at creating a smaller and faster web browser²⁰.
<http://www.mozilla.com/thunderbird>

¹⁵ Source: en.wikipedia.org/wiki/GroupWise

¹⁶ Source: en.wikipedia.org/wiki/Lotus_Notes

¹⁷ Source: en.wikipedia.org/wiki/Microsoft_Entourage

¹⁸ Source: en.wikipedia.org/wiki/Microsoft_Outlook

¹⁹ Source: en.wikipedia.org/wiki/Microsoft_Outlook_Express

²⁰ Source: en.wikipedia.org/wiki/Mozilla_Thunderbird

Novell Evolution

Novell Evolution (formerly Ximian Evolution, prior to Novell's 2003 acquisition of Ximian) is the official personal information manager and workgroup information management tool for GNOME. It combines e-mail, calendar, address book, and task list management functions²¹.

<http://www.novell.com/products/desktop/features/evolution.html>

Pegasus Mail

Pegasus Mail is a free, standards-based electronic mail client developed by David Harris. It was originally released in 1990 for MS-DOS, but was ported to Microsoft Windows early.²² An e-mail system for Novell NetWare (v. 2.15A and later), and standalone systems using the WINSOCK TCP/IP interface

<http://www.pmail.com>

The Bat!

The Bat! is an email client for the Microsoft Windows operating system. It supports folders, filtering, viewing HTML email without the need to have Internet Explorer installed, and international character sets. It also has a special feature named Mail Ticker, and can import messages from Microsoft's Outlook and Outlook Express programs. Version 2.0 introduced full IMAP support, a basic HTML editor, Anti-Spam Plug-in and a Scheduler²³.

<http://www.ritlabs.com/en/products/thebat>

Email – Webmail Programs

AIM Mail

AIM Mail is AOL's Free Web-Based Email with free access via any IMAP-Compliant Program including Microsoft Outlook.

<http://www.aim.com>

Gmail

Gmail is a free webmail service offered by Google, Inc.

gmail.google.com

Hotmail/ Windows Live Mail (FKA “Kahuna”)

Hotmail is Microsoft's free web-based e-mail service, accessible from anywhere.

www.hotmail.com

²¹ Source: en.wikipedia.org/wiki/Novell_Evolution

²² Source en.wikipedia.org/wiki/Pegasus_Mail

²³ Source en.wikipedia.org/wiki/The_Bat!

Microsoft Exchange

Microsoft Exchange Server is a collaborative software server from Microsoft, positioned as a rival to the Lotus Notes / Domino server from IBM and recently challenged by a number of Linux-based competitors, first and foremost Scalix. The use of Microsoft Exchange is very widespread in large corporations using Microsoft infrastructure solutions. Among other things, Microsoft Exchange manages electronic mail, and is thus a popular mail server²⁴.

www.microsoft.com/exchange

Squirrel Mail

SquirrelMail is a browser-based email client (also known as a Webmail program) written in PHP. It can be installed on almost all web servers as long as PHP4 is present and the web server has access to an IMAP and SMTP server²⁵.

www.squirrelmail.org

Yahoo! Mail

Yahoo! Mail is a free web-based e-mail service provided by Yahoo!²⁶.

mail.yahoo.com

²⁴ Source: en.wikipedia.org/wiki/Microsoft_Exchange

²⁵ Source: en.wikipedia.org/wiki/SquirrelMail

²⁶ Source: en.wikipedia.org/wiki/Yahoo!_Mail

Specific Tools – Chat / Instant Messenger

For the virtual company Instant Messenger (IM) can be deployed as a **means of communication mechanism between staff members.**

"Chat" or "Online Chat", or "Instant Messages" (IM) can refer to any kind of communication over the internet, but is primarily meant to refer to direct one-on-one chat or chat rooms, using tools such as instant messenger applications²⁷.

Additionally, IM can be utilized as:

- a form of instantaneous customer support
- a conference room where employees, managers, customers or others can exchange real-time information with little or no cost.

There are several forms of chatⁱⁱ, and many type of IM programs. The different forms and most popular software are listed below²⁷.

Internet Relay Chat

IRC

Multi-user chat service. IRC users can go into public or private channels to discuss a topic or transfer files. IRC servers are connected into networks. The most popular IRC client program is mIRC. Many hosts are wary of letting customers access IRC because of a possibility of a denial of service attack on the whole network²⁸.

<http://www.mirc.com/irc.html>

Instant Messenger Programs

Proprietary instant messaging clients are provided by the instant messenger network and only support the protocol for that network.

AOL Instant Messenger

The AOL Instant Messenger (AIM) is an ad-supported instant messaging and presence computer program, published by AOL, which uses the OSCAR instant messaging protocol and the TOC protocol.²⁹

www.aim.com

²⁷ Source: http://en.wikipedia.org/wiki/Chat_%28online%29

²⁸ Source: www.100best-web-hosting.com/termi.html

²⁹ Source en.wikipedia.org/wiki/AOL_Instant_Messenger

Bonjour

Bonjour is Apple's trademarked name for the Mac OS X implementation of Zero Configuration Networking (Zeroconf). Bonjour allows for automatic discovery of clients on a local network without the need for any sort of special servers like a DHCP server. Bonjour is enabled all across OS X and in many Apple applications³⁰.

<http://www.apple.com/macosx/features/bonjour>

Gmail Chat

Gmail Chat, provided by Google Inc. together with Gmail, lets send instant messages from e-mail account, see when contacts are online and save chat history.

<https://mail.google.com/mail/help/chat.html>

ICQ

ICQ (Acronym standing for "I Seek You") is a chat service, boasting more than 40 million users. This internet program allows to chat, send messages and files, exchange web page addresses, and surf the net with friends³¹. ICQ is the world's first instant messaging computer program, created by Mirabilis, an Israeli start-up company based in Tel-Aviv.

www.icq.com

MSN Messenger

MSN Messenger is an instant messaging client for Windows and Mac OS computers aimed mainly at home users. Among it's users it is referred as MSN, with examples of "I'll send it to you over MSN". MSN Messenger is sometimes used to refer to the .NET Messenger Service (the protocols and server that allow the system to operate) rather than any particular client. The business oriented client, which also uses Microsoft's .NET Messenger Service is called Windows Messenger³².

messenger.msn.com

Novell GroupWise

GroupWise is a workgroup application suite offering electronic mail and diary scheduling from Novell, Inc. It can operate on a number of server and workstation platforms. Server platforms include NetWare, Linux, and Windows, while the client software can run on Windows or Linux³³.

www.novell.com/groupwise

Skype Chat

Skype is a peer-to-peer internet telephony (VoIP) network, founded by Niklas Zennström and Janus Friis, the creators of Kazaa. The network is provided by all

³⁰ Source: <http://guides.macrumors.com/Bonjour>

³¹ Source: www.auctionsonlineguide.com/onlineauctionsglossary.html

³² Source: en.wikipedia.org/wiki/MSN_Messenger

³³ Source: en.wikipedia.org/wiki/Novell_Groupwise

combined users of the free desktop software application. Skype users can speak to other Skype users for free, call traditional telephone numbers for a fee (SkypeOut), receive calls from traditional phones (SkypeIn), receive voicemail messages, and chat with each other.

www.skype.com

Yahoo! Instant Messenger

Yahoo! Messenger with Voice takes allows connecting in real-time. In addition to sending text-based instant messages, it also allows for free worldwide PC-to-PC calling, drag-and-drop photo sharing with real-time discussions, stealth settings to control user's time online.

<http://messenger.yahoo.com>

Cross-protocol IM Applications

Adium X

Adium is a free instant messaging application for Mac OS X that can connect to AIM, MSN, Jabber, Yahoo.

<http://www.adiumx.com>

Fire

A multi-protocol IM client for OS X; supports the six most popular instant messaging services.

<http://fire.sourceforge.net>

Jabber

Jabber is best known as "the Linux of instant messaging" -- an open, secure, ad-free alternative to consumer IM services like AIM, ICQ, MSN, and Yahoo. Jabber is a set of streaming XML protocols and technologies that enable any two entities on the Internet to exchange messages, presence, and other structured information in close to real time.

<http://www.jabber.org>

Miranda IM

Miranda IM is an open-source project to recreate ICQ functionality and support mouseless operation.

<http://www.miranda-im.org>

Proteus

Proteus offers multi-protocol support all within a single application. Proteus allows to log into all user's IM accounts with ease. It offers support for AIM, MSN, Yahoo! (including Yahoo! Japan), ICQ, Jabber (including Google Talk), iChat Bonjour, Gadu Gadu, and Sametime and more.

<http://www.defaultware.com/proteus>

Specific Tools – Blogs, Discussion Boards and Forum Technologies

Blogs

A blog is a website where items are posted on a regular basis and displayed in reverse chronological order. Like other media, blogs often focus on a particular subject. Some blogs function as online diaries. Blogs have become powerful public relations tools for companies and individuals, especially for those who run their businesses virtually.

Blogs Difference from forums or newsgroups

Blogs are different from forums or newsgroups. Only the author or authoring group can create new subjects for discussion on a blog. A network of blogs can function like a forum in that every entity in the blog network can create subjects of their class. Such networks require interlinking to function, so a group blog with multiple people holding posting rights is now becoming more common. Even where others post to a blog, the blog owners or editors will initiate and frame discussion, manipulating the situation to their specifications³⁴.

Bulletin Board Systems (BBS)

A bulletin board system is a computer system running software that allows users to dial into the system over a phone line and, using a terminal program, perform functions such as downloading software and data, uploading data, playing games, reading news, and exchanging messages with other users. BBSes were in many ways a precursor to the modern form of the World Wide Web and other aspects of the Internet. BBSes were a highly social phenomenon and were used for meeting people and having discussions in message boards as well as for publishing articles, downloading software, playing games and many more things using a single application³⁵. Examples of BBS:

<http://www.google.com/Top/Computers/Bulletin Board Systems/>

³⁴ Source: <http://en.wikipedia.org/wiki/Blog>

³⁵ Source: http://en.wikipedia.org/wiki/Bulletin_board_system

Internet newsgroups

Newsgroups are publicly readable by everyone, and most are publicly writable, although some groups are moderated which means that postings are passed through a human to check for suitability before going out to the whole world. Internet newsgroups, again, can be used as a public relations and advertising tool where virtual companies can post product reviews proving themselves as experts.

Google allows to search through more than 700 million Usenet postings from a period of more than 20 years. <http://groups.google.com>

Specific Tools – VoIP

VoIP (Voice over Internet Protocol)³⁶ is a service that transmits voice and other sounds to remote locations using the internet or any IP network. It has been described as an “internet telephone”, as it uses the internet like a “global telephone network”. VoIP is also called IP Telephony, Internet Telephony, Broadband Phone, and Digital Phone.

VoIP allows you to make telephone calls using a computer network, over a data network like the internet.¹

³⁶ Source: “Voice Over Internet Protocol”, Federal Communications Commission, <http://www.fcc.gov/voip/>

VoIP Providers

Networks: Full Phone Service (Major US providers)

AOL TotalTalk
BroadVoice
Comcast
IXP Voice
Lingo
MetroTel
Packet8
SunRocket
VoicePulse
Vonage
Verizon VoiceWing

Networks: Software Service (Major US providers)

Gizmo_Project
PeerMe
Skype
Teleo (acquired by Microsoft -- will be integrated with MSN services)
tglo (FKA TheGlobe/GloPhone)
Vbuzzer

Software (Most Popular Systems)

GameComm (similar to Ventrilo and Teamspeak, gamer VoIP's)
Gizmo
Google Talk
Jajah
MSN Messenger
PhoneGaim
Tivi
Yahoo! Messenger
Zoep

More extensive overview of VOIP Providers and SW will be provided in the next version of the book. To receive updates to this book, please fill out the form at www.tnrgobla.com/remotely.

Specific Tools – Online Collaboration and Meetings

Online Collaboration and Meetings Software

Online collaboration software, also known as “groupware,” works primarily to provide distributed workforces with tools for sharing and reviewing documents, scheduling and tracking work on projects, and managing product and/or customer information. CRM, or “Customer Relationship Management” tools are a major contributor to online collaboration resource development.

Shared whiteboards, video and audio communications, and decision support systems are also common elements of the latest in online collaboration software. Many systems also provide statistical reports based on usage, or custom-defined reporting for accounting or benchmarking purposes.

Used in tandem with in-person meetings, online project management software is an essential tool for the virtual company. The right applications make work easier and more efficient for every member of the company.

Projects often fail due to a lack of communication. The use of collaboration tools, especially those that support real-time and/or on-demand transmissions, ensure an uninterrupted flow of information and promote timely exchanges.

Popular online collaboration and meeting software solutions are listed below. In the next version of the book we will discuss pros and cons of these solutions.

Commercial/Business Products

ACT! (Sage Software)

Basecamp (37Signals)

Breeze (Macromedia, acquired by Adobe)

Egroupware

Eware Systems

GoToMeeting (Citrix)

GoToMyPC (Citrix)

Groove Virtual Office (Groove Networks, acquired by Microsoft)

HyperOffice

Near-Time.net

Netmeeting (Microsoft)

Office Live Collaboration (Microsoft)

QuickBase (Intuit)

Salesforce.com

Sharepoint (Microsoft)

SugarCRM

VNC

WebOffice (formerly Intranets.com, acquired by WebEx)

Worksmart.net

Workspot

Chapter 6: Finding Remote Partners

Membership Organizations and Networking

Teleworkers

Teleworkers' member organizations and advocacy groups offer home- or remote-office workers a sense of comradery, social and professional networking opportunities, and resources & information. In rarer cases, these groups may also offer continuing education opportunities or certification programs.

Virtual Companies

Virtual companies may find that membership in telework-related organizations provide valuable leads to new business or business partners. Conferences, tradeshow & exhibitions, mailing lists, and discussion groups – often offered as benefits of corporate membership – are often good places to meet and/or learn about potential business partners and to begin to form lasting professional relationships.

Resources

Partnership Organizations are often resources for finding partners.

Trade Groups

- ☐ Local Chambers of Commerce
- ☐ Telcoa.org - Telework Coalition

Technology/Economic Development Groups (in Western Mass)

- ☐ Masstechleaders.org -- Mass Technology Leadership Council
- ☐ Mitforumcambridge.org -- MIT Enterprise Forum of Cambridge
- ☐ Hidden-tech.net -- Hidden Techies Network

Job listing sites

- ☐ Elance.com
- ☐ Jobs-telecommuting.com
- ☐ Homeworkers.org
- ☐ Workathometruth.co

Chapter 7: Security, Risks, and Threats

There are a number of security-related issues for a virtual company. Major concerns include:

- Back-up strategies for offsite computers
- Maintaining up-to-date anti-virus and spyware protection
- Firewall and network intrusion software for home users.
- Keeping company and client information secure

Security measures are as important for teleworkers as they are within a corporate network, if not more so. Far too often, remote computers are poorly maintained, lacking a regular backup schedule, and open to a host of network and trojan-based attacks. Consider implementing well-defined corporate policies for teleworkers and set rules for yourself if you are a solo business. Adherence to these policies must be encouraged and reinforced through ongoing training and awareness programs as well as regular equipment inspections and vigilant maintenance to screen for operational as well as security risks.

Many people overestimate the effectiveness of their anti-virus software, believing a program they installed some time ago will continue to protect them, even though new computer viruses are developed daily. Applied regularly, anti-virus software updates serve as added armor against these troublesome bugs. Signature file updates play a similar role in assuring that data remains contaminant-free.

Installing a personal firewall for each telecommuter provides another layer of protection. The firewall inspects all traffic entering and exiting the remote worker's location, and either permits or denies access. Should a firewall be breached, intrusion detection software, which looks for anomalies in traffic patterns, can be programmed to take action based on a set policy.

Computer security is always a bit stressful to consider, but don't let these suggestions discourage you from considering telecommuting as an option for your business. As the Internet has entered more and more homes, the security tools necessary for a home-based worker have improved markedly, becoming smaller, faster, and cheaper, as well as becoming much easier to maintain remotely. A little prevention in the beginning will guarantee that your business continues to flow smoothly and securely, regardless of where your workers are located.

Conclusion

"Doing Business Remotely" and telecommuting are becoming part of normal business practice in the United States and in the world. And yet, there is still a great deal to be learned.

Introducing telecommuting options to your organization may become necessary in the future, or perhaps has become a critical part of your business already. With all the benefits that this practice brings, it also introduces additional business challenges. How to choose the work force, how to optimized equipment and applications used to conduct business, how to find new customers and prove they will be served efficiently even if there is no physical location they can visit to check on the service provider, all are critical questions when planning a geographically distributed business.

Keeping up with industry developments and staying ahead of the curve is even more essential in today's fast-paced environment. We hope our introduction to the basic concepts of remote operations will help you make more informed decisions and inspire you to keep searching further to find the answers that will sustain and grow your own business.

Doing business remotely is a way of life at TnR Global. We have benefited from this practice and we're confident that by sharing our experience, we can help other businesses succeed.

Please share your thoughts and personal stories with us at remotely@tnrglobal.com.

We'd love to hear from you.

Appendix A

A bit of hindsight...

Telecommuting or remote computing dates from the second generation of computers in the 1960's, where they were too big for everyone to get to them and too expensive not to share. *The GE-625 timeshare systems* are an example of those immense early computers, big iron and 110 baud teletypes far less powerful than today's cell phones. The first internet - Darpa Net – dates from the late 1960's.

During the 70's, shared mainframes and “dumb terminal” access lead to the development of almost every bank teller terminal around today. By the 1980's, small computers lessened the need to wire dumb terminals and by the end of the 80's, terminal simulators ran on PC's and big machines were only for older or corporate-wide systems. This setup continued into the '90's – until the internet came on strong.

By 2000, telecommuting saw a resurgence and today, as a vast percent of the average American businesses and homes have dedicated a internet connection, operating a whole business totally online is very possible, if only common in certain markets or locations.

According to Gartner's Research Report published in September 2005, By 2008, 41 million corporate employees globally will spend at least one day a week teleworking, and 100 million will work from home at least one day a month. The highest proportion of these will be U.S. workers. In 2005, in the US, 12.1 million telecommuted at least one day a week.

References

"IX-Policy for Home Offices", "Home-Based Worksites -- DIR # CPL 2-0.125", OSHA Instruction, US Dept of Labor, February 2005,
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=2254

"Carpal Tunnel Syndrome, NIOSH Facts, Center for Disease Control and Prevention, June 1997, <http://www.cdc.gov/niosh/ctsfs.html>

Crandall (2005), Trembalay (2002)
Dave Crocker, "Email History", The Living Internet, March 2006,
<http://www.livinginternet.com/e/ei.htm>

"Don't underestimate the importance of ergonomics", HCPro, February 2006,
<http://www.hcpro.com/content/55593.cfm>

"Ergonomics", Health and Safety Terms, EDP HS&E Consultants, March 2006,
<http://www.edp-uk.com/glossaries/terms.htm>

© 2005 Gartner, Inc. and/or its Affiliates.
Teleworking: The Quiet Revolution (2005 Update)
Caroline Jones
Publication Date: 14 September 2005 ID Number: G00122284

"Home-Based Worksites -- DIR # CPL 2-0.125", OSHA Instruction, US Dept of Labor, February 2005,
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=2254

"Federal, State, & Regional News, Legislation, and Programs", The Telework Coalition,
<http://www.telcoa.org/id35.htm>

"Labor and Employment Alert", Goodwin Procter, March 30, 2005,
http://www.goodwinprocter.com/publications/LE_IndContractors_3_30_05.pdf

McDonald (2004)

"What is the Difference Between Telework and Telecommuting?", The Telework Coalition, February 23, 2006, <http://www.telcoa.org/id193.htm>

Wikipedia, March 2006, <http://en.wikipedia.org>
Material from Wikipedia is used in accordance with section two of the GNU Free Documentation License on verbatim copying.

"Voice Over Internet Protocol", Federal Communications Commission,
<http://www.fcc.gov/voip/>

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TnR Global LLC serves systems developers and the end customers they support in the creation of high value business information portals. We excel in the design and delivery of large databases, secure and highly available web portals, and the integration of new web-based applications with existing systems and information.

At TnR Global, we are experts in architecting the right solution for your information rich business challenges. With our broad knowledge - spanning hardware, operating systems, database management systems, web servers, software development, and web-based security and availability issues -- we design and develop applications, based upon a comprehensive assessment of your needs, that addresses your requirements for functionality, reliability and maintainability. And once applications are delivered, TnR Global provides continuous support to ensure realization of the full value of your systems investment.

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Design & delivery excellence

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- Secure and highly available web portals
- Integration of web-based applications with existing systems & information

System Architecture Experts

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- Maintainability.

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