Appendix B – Spanish Forms

B.1 Result – General Benefits Questionnaire

B.2 Result – Organisation Aspects Questionnaire

B.3 Result - User satisfaction questionnaire

B.4 Result – Patient Satisfaction Questionnaire

Appendix C – Italian Forms

C.1 Result – General Benefits Questionnaire

C.2 Result – Organisation Aspects Questionnaire

C.2 Result – User satisfaction questionnaire

C.4 Result – Patient Satisfaction Questionnaire

Appendix 3: Reimbursement methods

The CoE Market in Sweden

Glossary

SCB	Statistics Sweden
PHC	Primary Healthcare Center
CBA	Cost Benefit Analysis
CEA	Cost Effectiveness Analysis
CUA	Cost Utility Analysis
GP	General Practitioners
QUALY	Quality Adjusted Life Years
HUI	Health Utilities Index
HRQL	Health Related Quality of Life

Market outline

The Swedish population passed nine millions in the year 2004. The population is estimated still growing for at least ten more years, according to Statistics Sweden (Statistiska Centralbyrån - SCB). Geographically Sweden is divided into 21 counties, where one actually is a municipality with county responsibilities. All the counties in their turn are comprised of all together 290 municipalities. The Swedish healthcare market divides the country into six regions. The National Board of Health and Welfare supervise all health care to ensure fulfilment of obligations and laws. In total there are about 80

hospitals in Sweden of which eight are University hospitals, a few includes several units and others are pure psychiatric hospitals. Two regions, Uppsala/Örebro and Skåne have two University hospitals. Uppsala/Örebro is a SPEX pilot site region. The average size of all the hospitals in Sweden are bigger compared to, for example and especially, those in the United Kingdom. The university hospitals typically comprise 1000 beds. Almost all of the healthcare services in Sweden are provided by the public sector. Together the private and the public sector provide 1050 General Practitioners (GP) surgeries.

Market evaluation

If one is keenly aware of new trends within health care, there are among other things tendencies, that patients are looking for new ways within the health care. The reasons to this can vary, but in this case it can depend on that one has more resources in something, for example time or money or possibly both. Examples of such range are dental clinics in Poland or the newly opened dental clinic in Stockholm, an affiliate to a hospital in Thailand. The one in Stockholm has already received criticism from the National Board of Health and Welfare because of inadequate journals. Interviewed persons from the streets say that it seems to be an interesting alternative to other tooth clinics, but wonders how the quality of the clinics can be guaranteed.

The dialogue in the SPEX-project pursued of Italy about accreditation gets in this context very interesting. Is it possible that a respected medical unit in Sweden, within the established health care, can be a guarantor to that the health care operates according to "science and reliable experience"? An accrediting procedure according to the Italian model then is very interesting. It is perhaps arrogant to say that maybe SPEX is something of a weak link to this new alternative operation form of qualifies health care.

The SPEX model does not require the CoE and the PoC to be in the same country. Therefore is it credible to believe that PoCs will be established in countries that Swedish citizens can travel to. The Swedish healthcare market in the Baltic States is presently small, but may be facilitated as the Baltic States are now members of the European Union. Just the fact that a Swedish patient in Poland can ask a Swedish doctor a question in Swedish, under a tele consultation, probably makes the whole concept more attractive.

What new things as health care guarantee will involve, is hard to say. Today, the guarantee applies within Sweden's boundaries, but will it be the same in a five years period of time?

Market size for SPEX services

The market size for Uppsala University hospital for five selected clinical areas is estimated from the potential number of PoCs.

Note that "burn wounds" in Table 1 refers to severe burn wounds. Not every PoC will have a severe burn wound every year.

Table 2 – Market size for Uppsala university hospital and for five selected clinical areas

	Point of Care	Total Cases per Year
Wound patients	67	3350 (67*50)
Dermatology	1117 (1050+67)	15300 (1050*5 + 67*150)
Neurophysiology	67	4690 (67*70)
Burn wounds	67	60
Neurosurgery	67	1340 (67*20)
Neurology	67	3350 (67*50)

The potential growth in the market for the five selected areas of SPEX services is given in Table 2 below.

Table 3 – Potential market development for Uppsala university hospital

	Year 1		Year 2		Year 3		Year 4		Year 5	
	PoCs	Cases /year	PoCs	Cases /year	PoCs	Cases /year	PoCs	Cases /year	PoCs	Cases /year
Wound patients	1	50	1	50	2	100	3	150	4	200
Dermatology	0	0	1	150	3	450	7	1,0	12	1,800
Neurophysiology	7	490	7	490	7	490	7	490	7	490
Burn wounds	0	0	15	10	25	20	35	30	35	30
Neurosurgery	7	140	7	140	7	140	7	140	7	140
Neurology	1	50	3	150	5	250	7	350	7	350

The Swedish health care system

The Swedish health care system can be divided into a public and a private sector. The public health care is responsible for almost 99% of all care given in Sweden and is financed through taxes and, to a very small extent, patient fees. The health care system can be divided into four different levels: primary care, local hospitals, the regional level at university hospitals and national level at university hospitals. This division is made due to regional purposes and different responsibilities for different bodies of government. The county councils are responsible for public health care for the Swedish health care.

Primary care

The primary care is where the patient enters the health care system. It consists of everything from GPs to occupational therapists and welfare officers. The GPs alone receives more than 12 million visits every year, and the total numbers of visits are even greater. Nine out of ten patients with an emergency need gets to see a doctor.

The basis for the primary care is the primary health care centres (PHCs) which take care of medical treatment, preventive work, and rehabilitation that do not require the technical and medical resources of a hospital. People with chronic diseases, like diabetes get their regular checkups from the PHCs.

The first diagnose is often made by the family physician. If the patient can not get the treatment or a sufficient diagnose at the PHC, the doctor can refer the patient to suitable specialist care.

A special part of the primary care is the elderly care. In difference to most other areas of care, the local municipalities are responsible for this area, both for elderly people living at home and those in nursing homes. However, the county councils are still responsible for all treatment made by doctors. The county councils and the municipalities have a responsibility to cooperate with each other, and this is not without problems due to different budget considerations.

County hospital care

Sweden has more than 20 county hospitals and about 40 local hospitals that take care of the patients that can't be treated in the primary care. The county hospitals have the

expertise to cover most of the health care areas. The local hospitals are smaller and don't have so many different types of specialists. Much of the treatment that takes place in the county hospitals is for "In patients", which means that the patient has to stay at the hospital for a number of days. New methods and more advanced technology enable many surgeries to be made as "out patient" or day surgery**.** This saves money for the regions and enables more patients to be treated.

Regional/National care

There are eight regional hospitals in Sweden. The regional hospitals are also called University hospitals and have close cooperation with the medical faculties in the areas of education and research. The regional hospitals treat all the rare and complicated diseases and injuries. The counties that do not have a regional hospital have agreements with the counties that have the highly specialized care.

For rare conditions the diagnosis and treatment is concentrated to a few of the university hospitals, national level. Uppsala university hospital has amongst other specialized in complicated wounds and burn treatment. Due to the concentration of rare conditions to a few university hospitals, national level the hospitals are guaranteed enough patients to be able to guarantee an adequate high level of competence and skill.

The private care sector

The county councils and regions may buy services from private companies. Activities that are carried out by private companies through municipalities or county councils/regions are still financed using public funds. Due to the Swedish legislation the private companies are not allowed to charge higher patient feed than the government run care facilities and they must offer their services on the same term as their counterparts in the public sector.

Privately-run activities that are financed using tax revenues must offer the service concerned to the citizens on the same terms and conditions that apply for similar public services. This means, for example, that citizens pay the same for a service irrespective of whether it is provided by the public sector or a private company.

Socio Economic Models

This chapter contains a description of the socio economic models we have chosen to work with to analyze the costs involved in the project and the consequences of using telemedicine. This will be done by use of acknowledged economic methods.

Introduction to socio economic methods used in the health care sector

A socio economic analysis can be performed with the purpose of defining the consequences of implementing a new technology in the health care sector, which makes decision making easier. The socio-economic models can be used to facilitate an analysis of not just economic factors, but also the social aspects of different scenarios. In the area of medical technology in the health care sector three socio economic methods can be relevant: Cost-benefit analysis, cost-effectiveness analysis, and cost-utility analysis. The three socio economic methods all measure the economic costs against some consequences. What distinguishes the three methods is the way the consequences is determined. A consequence can be seen as the effect of the usage of a medical technology, both seen from the viewpoint of the patient and for the society. Beneath are an overview of the methods and a short description of how the consequences can be measured.

- **Cost-benefit analysis (CBA)**: Consequences are measured/quantified in money terms.
- **Cost-effectiveness analysis (CEA)**: Consequences are measured in natural units, both intermediate effects e.g. how many units mmHg is a patients blood pressure lowered by use of a technology, and in final effects: how many years have the patient gained.
- **Cost-utility analysis (CUA)**: Consequences are measured in Quality Adjusted Life Years (QUALY), as a measurement of the improved life quality.

The costs of the use of SPEX can be calculated by looking at the following cost areas: Costs for the health care sector (involved personnel, purchase/use of devices, and use of buildings), costs for the patient/family (transport, time expenditure, user payment), and costs for the society (illness and handicap, as lost working ability and thereby lost earnings). Furthermore the costs will be both fixed costs and variable costs.

What is relevant in SPEX relations is to look at the consequences that involve an improvement of quality of life, and to analyze the costs against the effects of the treatment in terms of how fast the wound of the patients heals. We have therefore chosen to look at the cost effectiveness analysis and the cost utility analysis. These two socio economic methods will be described in the following two sections together with an explanation of how we will use them in this project.

Cost Effectiveness Analysis

CEA is a model for comparing the relative value of various clinical strategies. The way it is usually used is when a new strategy is compared with current practice. CEA can be used to calculate a cost effectiveness ratio (called CE ratio in the equation) using the following formula:

$$\text{CE ratio} = \frac{\text{cost}_{\text{new strategy}} - \text{cost}_{\text{current practice}}}{\text{effect}_{\text{new strategy}} - \text{effect}_{\text{current practice}}}$$

The cost effective ratio might be considered as the "price" of switching to the new treatment. If the price is low enough the new treatment is considered cost effective.

When using CEA it is important to remember what it means to consider a new treatment as cost effective. A cost effective treatment does not guarantee that it saves money and vice versa. The very notion of a cost effective treatment requires a value judgment so the definition of a good price for a specific outcome can vary from person to person. CEA is also only relevant to certain decisions which Table 3 explains. The use of a CEA is only relevant if the new treatment is more effective and costs more, or if the new treatment is less effective and costs less. If the new strategy are more effective and costs less, then the new strategy should be implemented immediately according to Table 3.

Table 3 – Explains under which conditions the CEA is relevant.

Effectiveness	**Cost**	
	New strategy costs more	**New strategy costs less**
New strategy is more effective	CEA	Adopt new strategy

New strategy less effective	New strategy is dominated	CEA is relevant

The main thing to keep in mind when using CEA is to make sure that the existing technology are being compared to the new treatment and have a relevant measurement of the effects of the new treatment.

Possible measurements of the effects of the new telemedicine treatment could be:

- The time (days/months) the patient needs to have his/her wound treated at home by nurses.
- The time the patients are at the waiting lists before getting the treatment.
- The number of treatment sessions the patient has to go through before being discharged from the hospital.
- The number of days the patient are admitted to the hospital.

Choice of data collection method

Before the calculation of the cost effectiveness ratio we will look at the costs of the present and the new strategy. These are shown in Table 4.

Table 4 – estimation of some of the costs with the present and the new strategy.

Description	Detailed description	Cost (SEK)
Cost present strategy	Cost Eskilstuna Examination	3530/DAY
	Cost transport	2.500
	Cost Uppsala Hospital treatment	20.000 – 800.000
	Cost Eskilstuna home care	2000/WEEK
	Total cost	X
Cost new strategy	Uppsala Hospital cost	X
	Cost Eskilstuna	X
	Cost home care	2000/WEEK
	Total cost	X

If the cost of the new treatment is much less than the present treatment, and as the effect of the new treatment is better, it will not be relevant to apply the CEA according to Table 3. The new treatment methodology should be implemented without further analysis.

On the other hand, if the cost of the new treatment is more expensive than the present treatment method, it is relevant to perform a complete cost effectiveness analysis. And in that case it is needed to choose an appropriate effect to measure the cost against.

The shortcomings of using the CEA are that it is only possible to measure the cost against one effect at the time and often there will be several effects that are relevant to measure the costs against. In the case of SPEX it is relevant to look at several effects: The possible improvement of the quality of care, the patient treatment satisfaction, and the number of days the patients are admitted to the hospital.

Cost Utility Analysis

The CUA is based on the cost effectiveness criteria; cost per QALY. The outcome is rated or assessed by the recipient, the patient. One of the strengths of cost utility analysis is that it is a good method for comparing different types of projects due to the usage of the natural unit QALY.

The QALY will give a measure of the expected gained life years and with each year reflecting the quality of that year. By having such a measure of the quality of life it is possible to evaluate the quality of years gained against the economic price of the treatment. For example if the price of a treatment is “X” SEK per QALY the treatment method is thought as being inexpensive, and if the price is “Y” SEK per QALY the treatment method are thought to be expensive.

By use of a telemedicine treatment instead of a “normal” face-to-face treatment it is highly relevant to look at the patient satisfaction of the new treatment. The CUA method should be used if the implementation of a medical technology involves changes in the quality of life of the patient, it could therefore be relevant to look at the costs of implementing and using SPEX against the improvement of quality of life of the patient.

When using QALY for measuring the outcome some assumptions are made, this is for example that the health of a patient is the only important outcome, and that there is a

direct relation between quality and quantity of life. To estimate the QALY it is recommended to use a health status classification system. For example can the Health Utilities Index (HUI) be used. This is a generic, preference-scored, comprehensive system for measuring health status, health-related quality of life (HRQL), and produces utility scores. The health status can in this way be described as the duration of life modified by the impairments, functional states, and social opportunities that are influenced by the treatment.

With the HUI, it is possible to describe multiple different health statuses, and it is possible to create a health profile of the patient. The HUI are used for calculating the QALY by a generic system, which is a utility scoring system indicating the preference of dead (0.00) and perfect health (1.00) on a generic scale.

Choice of data collection method

To be able to create a health profile of the patient and to quantify the QALY we have chosen to use a questionnaire, which is based on a self-evaluation of the patient of the health state before treatment with SPEX and an evaluation of the health state of the patient after treatment with SPEX. This makes us able to assess the improvement in health state.

The questionnaire used for the patients is based on parts of the HUI, which can be seen in Table 5. We chose to focus on the following areas of health states: Mobility, emotion, self care, and pain, as these are the areas we have estimated to be influenced by treatment with SPEX.

Table 5 – Health utilities index classification system used to quantify the QALY for the SPEX patients

Attribute	Level	Description
Mobility		

	1	Able to walk, bend, lift, jump, and run normally for age.
	2	Walks, bends, lifts, jumps or runs with some limitations but requires no help.
	3	Requires mechanically equipment (such as canes, crutches, braces or wheelchairs) to walk around independently.
	4	Requires the help of another person to walk and get around and requires mechanically help as well.
	5	Unable to control or use legs and arms.
Emotion		
	1	Generally happy and free from worry.
	2	Occasionally fretful, angry, irritable, anxious, depressed, or suffering night terrors.
	3	Often fretful, angry, irritable, anxious, depressed, or suffering night terrors.
	4	Almost always fretful, angry, irritable, anxious, depressed.
	5	Extremely fretful, angry, irritable, anxious, depressed requiring hospitalization or psychiatric institutional care.
Self care		
	1	Eats, baths, dresses and uses the toilet normally for age.
	2	Eats, baths, dresses and uses the toilet with difficulties but independently.
	3	Requires mechanically equipment to eat, bath, dress or use the toilet independently.
	4	Requires the help of another person to eat, bath, dress or use the toilet.
Pain		
	1	Free of pain and discomfort.
	2	Occasional pain. Discomfort relieved by non-prescriptive drug or self-controlled activity without disrupt of normal activity.
	3	Frequent pain. Discomfort relieved by oral medication, and occasionally disrupt of normal activity.
	4	Frequent pain and disruption of normal activity. Discomfort requires prescription narcotics for relieve.

Results of the questionnaire

Due to limited resources and time we have modified the way of conducting the CUA. Instead of purchasing a pre constructed questionnaire, as prescribed for a complete analysis, we have chosen to construct an alternative questionnaire based on the HUI

classification system. This makes us able to get an estimate of the measure of the improvement in quality of life.

The results are based on the evaluation of three patients' health states, and the further analysis will be based on the improvements in quality of life rather than the exact measure of the QALY.

With the worst possible health state from the asked questions counting as 0 and the best possible health condition counting as 1, the three patients improved from 0.59 to 0.72 by treatment of SPEX.

NOTE: (Explanation of numbers: worst case: 18 point: score = 1 best score: 4 points: score = 0. Patient scored 9 2/3 before treatment with SPEX and 8 after treatment with SPEX. ((9 2/3 -4)/(18-4) = 0.41. The same calculation for the other. The scale is then turned around: 0.41 → 0.59 and 0.28 → 0.72, as 1 should be perfect health and 0 should be the worst case.)

As regarding to the maximum volunteering payable cost for at treatment, this is not relevant to evaluate for the Swedish patients, as the welfare system pays the price of a treatment when a patient needs it.

Reimbursement

Since the healthcare is socialised in Sweden there is need to approach the whole reimbursement issue a little differently. Hospitals in Sweden should not se the SPEX project as a way to earn more money, instead it is a way to save money. This following chapter will take these issues in consideration and suggest a model suitable for SPEX in Sweden.

Existing "models"

The main part of the hospitals funding comes from county taxes. It covers approximately 70% of the health- and hospital costs. The health care that focuses on elderly and handicapped gets its funds from primarily from the municipality. The healthcare is also nationally funded and this covers approximately 20% of the total healthcare cost. Private insurances are only applied to a small part of the population in Sweden and cover 2ppm

of the total founding. When developing a reimbursement system for telemedicine project it should focus on getting a win-win situation for the CoE and the PoC. The models that have been discussed are:

- Subscription agreement on hospital level: Using this model the PoC pays an annual fee to the CoE. This fee should cover the consultation over the phone, mail and further development. The drawback with this method is that it could create a over usage of the system and thereby costing much more for the CoE than gained from the fee.

- Fee for service for accomplished health care jobs: Using this model there will be a fixed cost to pay dependent on the health care service that is used. While this method will cover the CoE:s costs and not create an over usage of the system there may be reluctance from the PoC to use the system at the end of a year when the budget is strict, even if the CoE can offer better treatment.

- The Combi method: When using the combi method there will be an annual fee and a patient cost these will be split so each covers 50% of the expense. This is the model most likely to be used in Sweden.

Reimbursement problems

By treating the patients at the PoC and thereby increasing the competence of doctors working there, it is unavoidable that at the same time the CoE looses some of its competence due lack of new patients. It is calculated that 25% of a physician's time is made up by competence development and traditionally this cost is imbedded into the treatment of a patient coming from another municipality. This imbedded cost will disappear when utilizing SPEX and must be remedied. Due to the mentioned shortcomings of the existing principles for calculating costs for reimbursement a new and more effective model is needed. The new model for reimbursement should take the following obstacles into consideration:

- Inhibit telemedicine development

- Consider low budget situations at the PoC

There should also be a focus on the following areas:

- Stimulate the use of telemedicine in general,

- Promote the use of SPEX in Eskilstuna.

- Make it a win-win situation for both the CoE and PoC.

Estimated savings

The estimated savings for a PoC per SPEX case is set out in Table 5 below.

Table 5 – Savings per case for PoC

	Unit saving
Wound patients	9,066 €
Dermatology	1,813 €
Neurophysiology	906 €
Burn wounds	9,066 €
Neurosurgery	11,786 €
Neurology	6,346 €

PoCs are not expected to pay any fees for joining a CoE.

In the Swedish "socialised medicine", the university hospitals are not allowed to run at a profit. They must just cover their costs. This is done by bilateral agreements between the different counties referring patients to the hospital and the hospital itself.

A key element of the SPEX project is therefore to establish a model in which some of the savings for the PoC are transferred to the university hospital through these bilateral agreements, in order to cover the costs incurred by the university hospital in providing the SPEX service(s).

Competition

As mentioned in the Market Outline there is eight University Hospitals in Sweden. All of them are potential competitors to Uppsala University Hospital on this market. In Sweden (in particular the northern parts) the population is widely spread out making it a perfect country for telemedicine. As an example: Kiruna, a mining village in the northern parts of Sweden, has a population of about 23 000 inhabitants. Their closest University Hospital lays 600 kilometres away. A CoE that can convince a large amount of these kinds of small

communities to use their knowledge will have an advantage over the other CoEs.

Sweden has however strict rules of who is responsible for the healthcare in different stages of a desease, making it difficult to compete. The hospitals are not supposed to make a profit but rather to reach break even. With projects like SPEX a hospital can hopefully reach break even with less effort than without it.

The university hospital that finds the best model for a win-win situation will win this race. In multi-professional organisations such as healthcare, attitude and collaboration issues will be most important.

In recent years many Swedes have travelled to other countries to get their healthcare, of varying quality. This is mostly esthetical plastic surgery and dental care which cost quite a lot of money in Sweden. Such countries can, in the future, become competitors to Uppsala University Hospital as a CoE (both to new and old PoCs).

The Swedish healthcare market expansion

Uppsala University Hospital is now a CoE to Eskilstuna Hospital as a PoiC. Uppsala University Hospital could in the future be a CoE to several other hospitals and departments in Sweden, but also internationally. The expansion could even let Uppsala University Hospital be a PoC to an international CoE, stationed for example in the US. Another expansion is patients from other countries being referred to Sweden, when the cost of healthcare and travelling expenses is a more economic alternative. That is when the Swedish healthcare is less expensive compared to the patient's own country and as long as flying and gas prices are reasonable. It could also be Sweden referring patients abroad, to CoE *or* Uppsala University Hospital accredited hospitals, when that is a better economic alternative. Patients in Sweden are often reluctant to consider foreign healthcare, especially when the economical difference is big. They are scared of horror stories with unhygienic and undereducated treatment. That is why an accredited hospital gives a more trusty and professional feeling.

Appendix 4: Collaboration software evaluation

Collaboration software evaluation

Software tested:

1. One Note (Microsoft)
2. Live Meeting (Microsoft)
3. Skype (Skype Technologies)
4. Groove Virtual Office (Groove Networks)

1. One Note (Microsoft)

Microsoft's note taking and collaborative program One Note (ON), was the first tool tried:

Features:

- Ease of use: ON is really easy to use, the controls are a lot like Microsoft Word. All the controls are easy to find and easy to understand.
- Image Editing: The ease to modify, highlight and use colored "pens" to modify an image.

Other:

Problem with dpi settings arise if the two windows do not have the same drawing on the images was not the same on both screens. Another problem was audio; ON allowed the insertion of audio clips but no real time audio could be found. Another problem is the document editing, were it is only possible to import a document as an image. This does not allow seem less editing of documents, but it can be done. The list price for ON is about $100USD. This tool is very powerful but not suited for true SPEX type collaboration.

2. Live meeting (Microsoft)

LiveMeeting (LM) is an online meeting tool from Microsoft with tools to integrate into the rest of the Microsoft Office System. Microsoft offers LM under two subscription models. The first model is a flat monthly subscription amount for a quantity of seats. The other is a per-minute fee regardless of quantity of participants. Those prices are $375 and $750 for five seats and ten seats respectively. The other alternative is $0.35 per minute.

Features:

Ability to share Powerpoint slides, applications, and allows surveys within the presentation.

Geared toward having few presenters and several attendees and does not have strong simultaneous interaction features.

Offers both a Windows client and a Web-based client, so nothing needs to be installed. Microsoft also stores your presentations in sequence so they can be replayed in the future.

Other:

In comparison with OneNote's shared note sessions and Groove Virtual Office shared workspaces, LM is inferior as far as real time interaction for the price. All three, however, are Microsoft products.

3. Skype (Skype technologies)

Skype is a little program for making free calls over the internet to anyone else who also has Skype. It's free and easy to download and use, and works with most computers.

Features:

- Skype allows users to call each other over an internet connection for free. It also allows for calls to traditional phone numbers for a fee.
- Skype is an instant messaging program as well. You can have chats with individual people or groups of people in a chat room.
- Skype allows users to send files to each other.

Other:

Skype is a free program to download and works with any computer operating system. The program is available in many countries around the world and has good voice quality in calls. Skype is also very secure; everything that is sent is encrypted and then decrypted when received.

Depending on the internet connection speed of the user, the quality of the calling could be worse. Unfortunately it might take a large amount of training for people who are not very familiar with computers to use the program.

4. Groove Virtual Office (Groove Networks)

Groove is software that allows teams of people to work together over a network as if they were in the same physical environment. Groove Virtual Office (GVO) was the most useful collaboration tool tested.

Features:

- Group navigating**;** You can navigate web sites as a group with each person able to see the same browser on different computes and navigate through links as one.
- Video conferencing
- VoIP; Voice over internet where one person at a time can talk or everyone can talk.
- Collaborative Picture Editing; This program lets you upload a picture and have multiple people draw on it in real time while chatting using voice.
- File Sharing
- Simultaneous text document editing by multiple users

Other:

The system uses 192 bit strong encryption making it very secure. A full version of grooves software costs $230 dollars per copy although this cost might be lower per copy depending on how many people buy it. Groove does not support application sharing like Live Meeting but is much cheaper. This is the best piece of software tested for off the shelf collaborative software. Doctors could easily share information within the SPEX project using this software.

Company Description of the Software

Groove Virtual Office, now on version 3.0, takes a slightly different approach to online collaboration. Instead of creating a traditional intranet or extranet accessible from a Web browser, it sets up what the company likes to call "virtual workspaces": customizable windows where people can not only share information but interact in real time. Some workspaces, for instance, have chat clients built right into them, letting you instantly trade text messages with collaborators. You can even communicate via Voice over IP.

With Groove, unlike Basecamp and Intranets.com, you'll have to install a 40MB software client before you can start collaborating, and you'll need an additional 60MB for storing data. That makes it less ideal than the others for dealing with outside clients (as opposed to inside employees). Groove operates like a peer-to-peer network: All data is stored on your machine and the machines of your collaborators—not on third-party servers. When you first start the app, up pops the Groove LaunchBar, a sliver of a window where you set up, manage, and launch your various workspaces and maintain an interactive list of the people you're collaborating with.

You can create a new workspace simply by clicking on a link at the top of the LaunchBar. A wizard lets you choose what type of workspace you'd like to create, and just like that, the workspace pops up on your desktop. You can create a "standard" workspace with a discussion forum and a tool for sending files back and forth across the Net. You can create a special "file-sharing" workspace that lets multiple people edit the exact same file across multiple machines, automatically synchronizing changes from each user, or you can create a "custom workspace," drawing from 15 different prebuilt templates.

Once your workspace is up and running, you can add all sorts of new tools at your leisure. As noted, you can add chat or VoIP clients. You can add a whiteboard that lets sketch out ideas in freehand. You can add a "pictures" tool that lets you instantly display digital images in the workspace. You can add notepads, calendars, or forms, and the list goes on.

Bringing in new collaborators is a breeze. If someone is already a Groove user, you can seamlessly send them an invitation to your workspace over the Groove network. If they're not, you can quickly send them an e-mail from either the workspace or your LaunchBar, providing instructions on how to download and install the application.

Even when you're not using a workspace, Groove runs in the background, and when someone comes online or posts new information, you can arrange for various alerts to pop up on your Windows taskbar. Simply clicking on an alert will then take you to the appropriate workspace.

Groove does have a bit of a learning curve. You'll likely need a few days before you get the hang of the basic process, and even then you won't know all its various tricks. But in the end, it's more powerful than Basecamp and Intranets.com, and it's competitively priced. You can purchase the full Professional Edition of Groove Virtual Office for a one-time fee of only $179. Groove also offers an even less expensive version of the product, the File-Sharing Edition ($78). It lacks certain high-end features, including the ability to conduct Web conference-style virtual meetings, design and customize forms, and integrate the product with Microsoft's virtual workspace product, SharePoint.

If you're an experienced computer user and you work with other experienced users, Groove is the way to go. Just make sure you're all running fairly new PCs. Though the company has improved the app's performance, it can still put a slight drag on older systems. If you're less comfortable with PCs and PC apps, or need to invite a rotating list of outside clients to collaborate, you'll be perfectly happy with Basecamp or Intranets.com. Whichever you choose, it's time to make the switch. When it comes to long distance collaboration, phone calls and e-mails just don't cut it.
