How to manage interaction in international project planning in web conference

Ilkka Pekkarinen

Thesis

Ylempi ammattikorkeakoulututkinto

Savonia ammattikorkeakoulu

SAVONIA-AMMATTIKORKEAKOULU **OPINNÄYTETYÖ**
Tiivistelmä

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Työn nimi Miten verkkokokouksen saa toimimaan kansainvälisessä hankesuunnittelussa?	
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Työn tarkoituksena oli löytää malli verkkokokouksen toteuttamiseksi kansainvälisessä hankesuunnittelussa. Keskeiset tutkimuskysymykset olivat: 1. Mitä edellytetään onnistuneelta verkkokokoukselta? 2. Onko verkkokokous yhtä tehokas kuin samassa tilassa pidettävä kokous, jossa kaikki on fyysisesti läsnä? 3. Mitä verkkokokouksen tuloksellinen johtaminen vaatii?

Työ toteutettiin toimintatutkimuksena. Tutkimusaineisto koottiin yhteensä neljästä kokoussarjasta, joista kolmen ensimmäisen aikana luotiin malli verkkokokouksen toteuttamisesta ja mallia testattiin neljännessä kokoussarjassa.

Verkkokokousta on käytetty reaaliaikaisiin kokouksiin ja esityksiin Internetissä. Verkkokokouksessa jokainen osallistuja istuu omalla tietokoneellaan ja on yhteyksissä muihin osallistujiin Internetin kautta.

1. Onnistuneessa verkkokokouksessa osallistuja tarvitsee uudehkon tietokoneen, kuulokemikrofonin ja web-kameran. Yhteys Adobe Connect Pro - palvelimeen tulee testata teknisen tuen kanssa ennen ensimmäistä kokousta. Kokouksen ennakkovalmistelu on tärkeä. Tehokas kokous kestää enintään tunnin.

2. Verkkokokous voi olla yhtä tehokas kuin perinteinen kokous. Näyttää siltä että joissakin tapauksissa jopa tehokkaampi. Riskinä ovat tekniset ongelmat.

3. Kokouksen esityslista lähetetään osanottajille ennen kokousta. Esityslista on syytä kirjoittaa enemmän auki kuin normaalisti päätösehdotuksineen jos mahdollista ja laitetaan muistioon (Note) näkyville. Sihteeri kirjaa päätökset suoraan esityslistaan ja lähettää muistion osanottajille heti kokouksen jälkeen sähköpostilla. Kokouksen johtamisen kannalta osallistavat ryhmätyömenetelmät tehostavat osallistujien luovien ideoiden mukaan saamista ja kokouksen tuloksellisuutta.

Avainsanat
Verkkokokous, hankesuunnittelu, kansainvälistyminen, vuorovaikutuksen johtaminen

SAVONIA UNIVERSITY OF APPLIED SCIENCES **THESIS**
Abstract

Field of Study Natural Resources	
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The objective of this study was to find a method to manage interaction in international project planning process in web conference. Main research questions were: 1. What circumstances are needed for a successful web conference? 2. Is web conference as effective as a face to face meeting? 3. How to facilitate successfully a web conference?

The research method was action research. Research data was collected from four web conference series. During the first three international web conference series the method was created and tested with the fourth web conference series.

Web conferencing is used to conduct online meetings or presentations via the Internet. In a web conference, each participant sits at his or her own computer and is connected to other participants via the internet.

1. In a successful web conference, every user needs a rather new computer with headset and web camera. It is important to test the connection to an Adobe Connect Pro server before first conference with technical support. It is important that the conference is well prepared before the meeting. Effective meeting needs to be at a maximum one hour long.

2. Web conference can be as effective as face to face meeting. It seems that sometimes it could be even more effective when the conference is well prepared and well facilitated. Technical problems are a risk.

3. First it is important to plan the conference well and send the agenda beforehand to the participants. It is better to write the agenda in more detail than face to face conferences with a proposal for decisions if possible. Agenda is best placed in a note-pod, so that everybody sees it during the meeting. The secretary writes decisions straight into the note. Then the minutes are ready when the conference ends. From the facilitation point of view, participatory methods are good. There is a possibility to use participatory group work during the conference to get every participant´s creative ideas and have more effective results.

Keywords
Web conference, Project Planning, Internationalization, Interaction Management

TABLE OF CONTENTS

ABBREVATIONS

ACP – Adobe Acrobat Connect Pro Meeting web conferencing software

Face to face meeting – Participants are physically present in the meeting

Ilona IT – Information technology Reseller Company in Nordic

Interreg IVC – European Union program which funds regional development projects.

Moodle – eLearning platform

Pods - Tools in a web conference room

Savonia UAS – Savonia University of Applied Sciences

Skype - A software application for voice calls over the Internet.

1 INTRODUCTION

The objective of this study was to find a method to manage interaction in international project planning process in web conference. This method will be important for nature saving, cost-effective and safe international project planning.

The thesis consists of three international project planning cases and the method was action research. The pilot case project started in the autumn of 2007 and made one project application to the Interreg IVC call for proposals with international partners. In this pilot project the Savonia UAS started to test new information technology, web conferencing (figure 1), for international project planning and collaboration with international partners. The thesis had a final national case from May to June 2008 in Finland. In this case all the lessons previously learnt were tested.

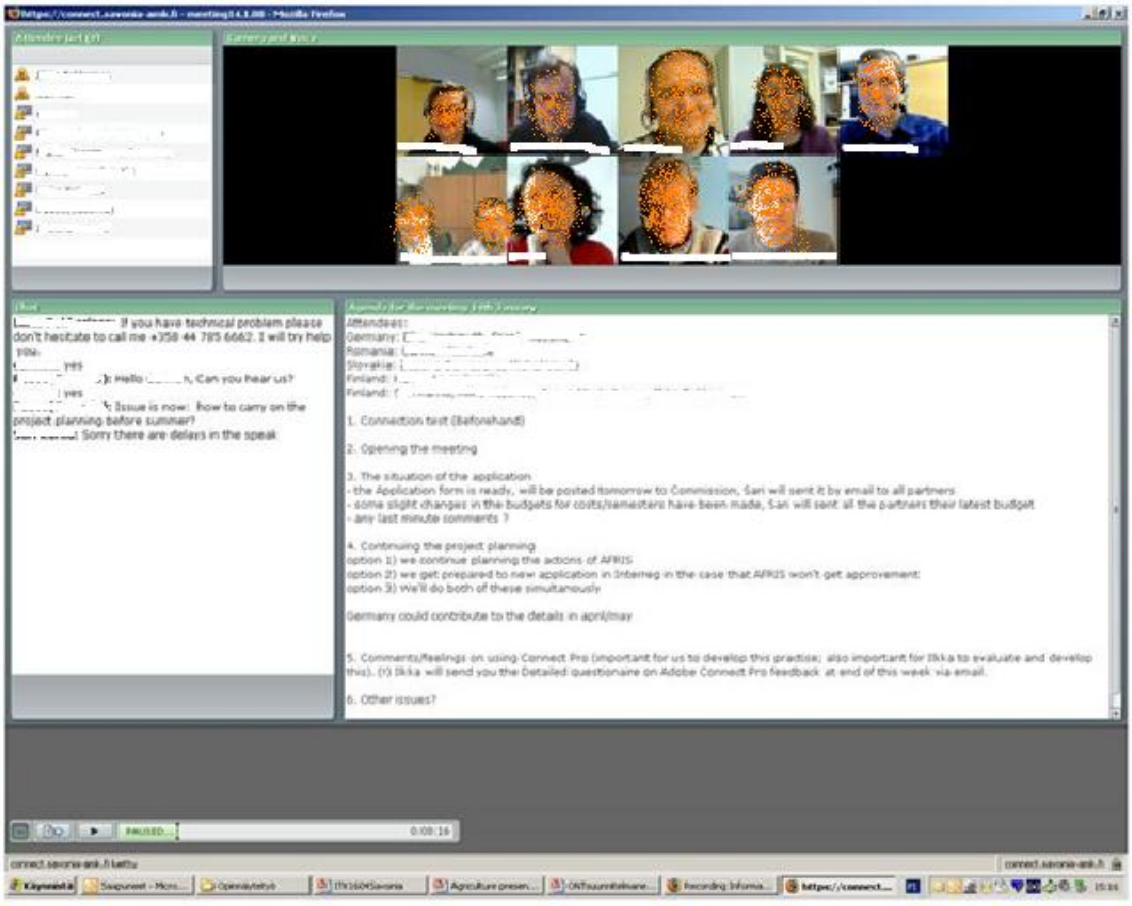

Figure 1. The overall look of the ACP web conferencing European Union project planning 19.1.2008

In a web conference, each participant or participants sit at own computers and are connected to other participants via the internet. There is a possibility to speak with each other, to chat in writing, share documents and work on them together. Participants can see each others in live video.

The idea of web conferencing is not very new. First steps were taken in the early 1960´s in the University of Illinois in USA. The technology has been available since the 1980´s in the form of video conferencing. This technology was rather expensive. Since the 2000´s web conferencing technology has taken a further step as the speed of internet connections increased. Web cameras and headset technology became better and cheaper. 2005 was the year when big changes started. Web conferencing started to be available for everybody on their own personal computer. Skype started to offer cost free web conferencing with people. Many companies have their own software for organisational use. Revolution of web conferencing was started.

2 DESCRIPTION OF STUDY PROBLEM

The origins of this study process lie in the author´s involvement in several projects in his everyday work. Main idea was to be one actor as other participants. This process would give the possibility to get reflections and define the pros and cons of web conferencing. The process covers three international negotiations and one national negotiation process done via a web conference. The work on these four cases was a long learning process.

There are two kinds of need for this kind of study. The first fact is that the old method for international project planning is very expensive and time-consuming, as it means travelling abroad. There is a need to save time and money as well as the environment. The carbon footprint is much smaller if instead of flying we can use new web conferencing technology.

The second need is to have a better way to collect all partners' know-how into the project proposal. Using only email for project planning doesn't give results good enough.

There are four reasons for international project planning in Finnish organisations:
First - to get financing for development;
Second - to access expertise in international projects;
Third - to join international networks;
Fourth - to become an inside actor in the development of their business sectors in Europe.

There is possibility to check your carbon footprint when you fly for example by using SAS Calculator from the company´s web page: http://sasems.port.se/EmissionCalc.cfm?lang=1&utbryt=0&sid=simple&left=simple .

Project planning has risks as only some proposals will get funding. This means that if the application is not competitive, you lose the money invested in planning.

Mainly project planning is work what partners do at their own risk. Requirement that project planning is as cheap as possible is understandable.

Many EU projects need at least three partners from different EU countries. Partners plan together a project and send a proposal to the Commission. There applications get evaluated. The best proposals will get funding for the project. The competition is hard. The partners have to put together their best knowledge when planning the project. The planning process really needs good and interactive work with partners. They need to find the best method for knowledge sharing.

Situation is very difficult. You need to share the best knowledge between partners. On the other hand you need to do it as cheap as possible. It´s clear that we need new solutions to manage these demands.

This study will clarify whether web conferencing is a good tool for that and what is the method which we can use this new tool for in as an effective way as possible, so that the best knowledge can be shared between partners.

The objective of this study was to test ACP web conferencing tool and to find a method to manage interaction in international project planning process in a web conference.

Three questions were especially in focus:

1. What circumstances are needed for a successful web conference?
2. Is a web conference as effective as a face to face meeting?
3. How to successfully facilitate a web conference?

3 CONCEPTS OF THE STUDY

3.1 Overview of web conferencing with ACP

Web conferencing is used to conduct online meetings or presentations via the Internet. In this study we focus on the Adobe Acrobat Connect Pro Meeting web conferencing software. There are many others web conferencing software available, such as Openmeetings, GoToMeeting, iLinc, Microsoft Office Live Meeting, Webex, DimDim or Elluminate.

Acrobat Connect Pro (ACP) software was a natural choice because it was taken into use at the Savonia UAS in 2007, the same year when this study started. The ACP is installed on a server, where every user takes contact via internet. Participants need a computer with internet connection, headset for audio and web camera for video. Flash Player 9 is mostly already installed in every computer, but if not, this free software needs to be installed.

The host of the meeting has established a meeting room before the first meeting and made it ready with different Pods (figure 2). Participants log in as a guest. Pods are windows what participants use during the conference, like different tools:

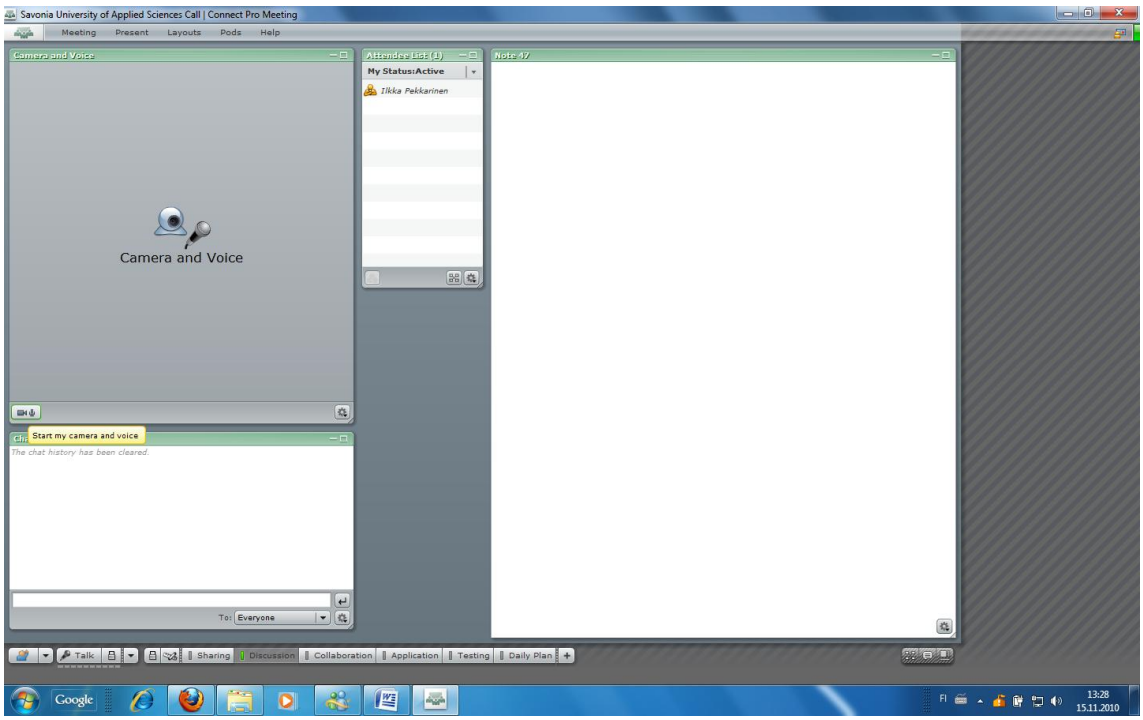

Figure 2. An example of the first view for a guest after logging in. On the left, Camera and Voice pod and Chat pod, in the middle Attendee pod, on the right Note Pod.

Camera and Voice – pod; start to use camera and voice.

Chat pod; gives the possibility to communicate for writing. Writing is very useful during the conference, especially if you have some audio problems.

Note pod; this is a common writing platform. Everybody can write here. Before meeting you could add agenda here and during the conference make a memo from the conference.

Attendee list - pod; show attendee list

Share pod; show PowerPoint presentation or share your own desk top to the other participants (figure 3). You could save in ACP-server files before conference and present them in conference. Other possibility is to share your own desktop with the others.

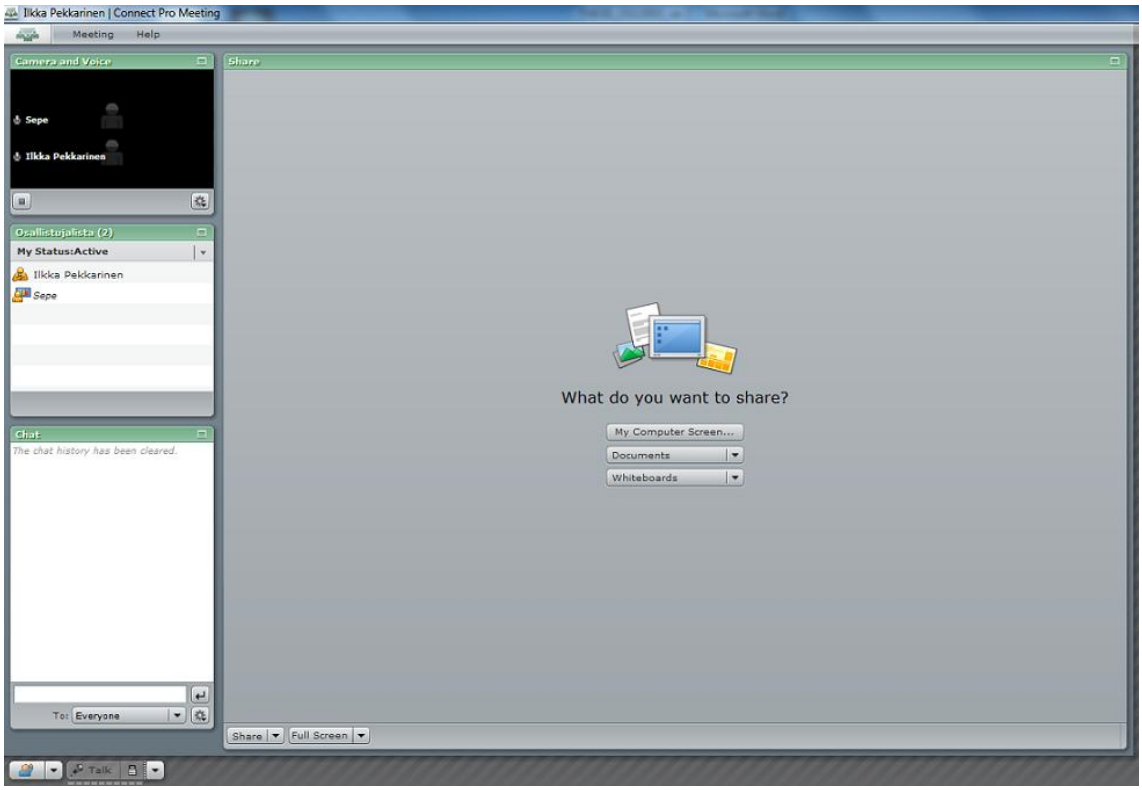

Figure 3. Share pod.

In this study we use web conference as a tool in an international project planning. A project is a defined set of actions that have been developed to meet agreed objectives, having specified outputs and set resources and timescales. In the project there are four dimensions: time, resources, scope and quality. The project process has four different steps: finding an idea, making a plan, action and closing. The idea is developed in project planning into a practical plan of implementation. One useful tool is to make a problem tree to understand the situation and to see what the main problem to be solved is. (Blackman 2003, p. 34-37)

3.2 Sharing expert knowledge

This study analyzes experts´ web conferences. Who is an expert? Pirttilä-Backman says that an expert is a person who has better knowledge and skills than others because of his or her education and expertise of some tasks and running those tasks. Also an expert needs good skills for reflection. Reflection is important for analyzing different possibilities for problem solving. (Kirjonen, Remes & Eteläpelto 1997, p. 223)

In web conferences experts discuss together to solve problems or to create a common project plan, as in this study. Heikkilä & Heikkilä (2001) use the term dialogue, which is important for effective working process. Dialogue is needed to find a common

understanding of issues. Dialogue is like thinking together. It is open reflection, where each expert finds his/her place in the whole process. (Heikkilä & Heikkilä, 2001, p. 32-33)

Two or more people discussing common things and trying to make conclusions is like a learning process. All attendees come to the meeting with their own knowledge. They share this knowledge during the meeting with the others. They try to understand each other and in the end they will make conclusions. As Koli and Silander (2003) say, the learning process is defined as learning which progresses in time and by degrees, is planned, and is goal-directed. (Koli & Silander 2003, p. 7)

Web conference is a good example of collaborative work. In this study, web conferences are goal-directed. Goal is to make a good project plan together. In this kind of work every participant needs to share his/her knowledge and skills, with other participants to form a shared deeper knowledge. Process is interactive, social activity. Feedback is given to others and received from others. On the basis of the thoughts that others present, the team is able to create new ideas and solve problems that would be impossible for an individual to solve. (Koli & Silander 2003, p. 18)

Knowledge sharing is an important part of an experts´ work. Knowledge sharing means sharing knowledge and experiences in a working team to accomplish a mission. It includes knowledge sharing in a group, linkage of knowledge and skills for new knowledge and pulling together groups resources to solve multiplex problem. Together they can solve much more difficult problems than anybody can alone do. (Hakkarainen, Lonka & Lipponen 2001, p. 143)

> *"For solving complex problems, the intellectual resources of a knowledge intensive organization cannot be adequately used without sharing everything that the employees know and understand."* (Hakkarainen, Palonen, Paavola & Lehtinen 2004, p. 66)

From this point of view, the ACP supports knowledge sharing very well. It gives a possibility to share your desktop to use every resource what you have in your own pc, to share PowerPoint and to use common writing and painting tools with others.

Knowledge sharing has some risks, too. The experts may fear that they lose their competitive value if they share all their knowledge. On one hand, knowledge sharing is very important to make better decisions, and on the other hand, there could be some

problems. Hakkarainen et.al. (2004) speak, of “hot cognitions” to explain those conflicts between team members. Their opinion is that those “hot cognitions” are somehow normal for human being’s self-protection:

> “*Hot cognitions are a normal part of human life, and probably help humans to protect themselves from too threatening inferences”.* (Hakkarainen, et al. 2004, p. 67-68)

There is no knowledge sharing without communication between team members. It´s important to share opinions, and listen, and understand others. Listening is important for understanding what we know together, to get a shared meaning/understanding. (Heikkilä & Heikkilä, 2001, p.120)

Knowledge sharing presupposes trust. First, individual experts need trust from their own employer. They are highly motivated in their own work when they get some autonomy to make their own decisions. Management should not try to control everything. Second they need to trust each other in a working team. Building trust is some kind of a socioemotional process where you construct human competence together. (Hakkarainen, et al. 2004, p. 70-72)

Parviainen says that trust is based on empirical experience. Trust is not a rational matter, there either is trust or there is not. It is difficult to give any rational reason for that, it´s more emotional reason. You have trust when you feel comfortable or relaxed. Lack of trust is noticeable by worry, doubt, fear or anger. Trust needs lot of time to build up, but it is very easy to break down. Trust relates not only to people, but also to organizations. For example a representative of an organization can be trusted because of his/her home organization. Trust becomes a problem if there is too much trust. Then it may lead to big mistakes. (Parviainen 2006, p. 170-172)

3.3 Working in a virtual team

Rosen, Furst and Blackburn (2007) give recommendations for good virtual teams. Their model of information and knowledge sharing in virtual teams is given in figure 4. They write that “*Organizations that best maximize the potential of their virtual teams to share knowledge should reap the benefits of making better, faster, and more innovative decisions”.* (Rosen, et al. 2007, p. 271)

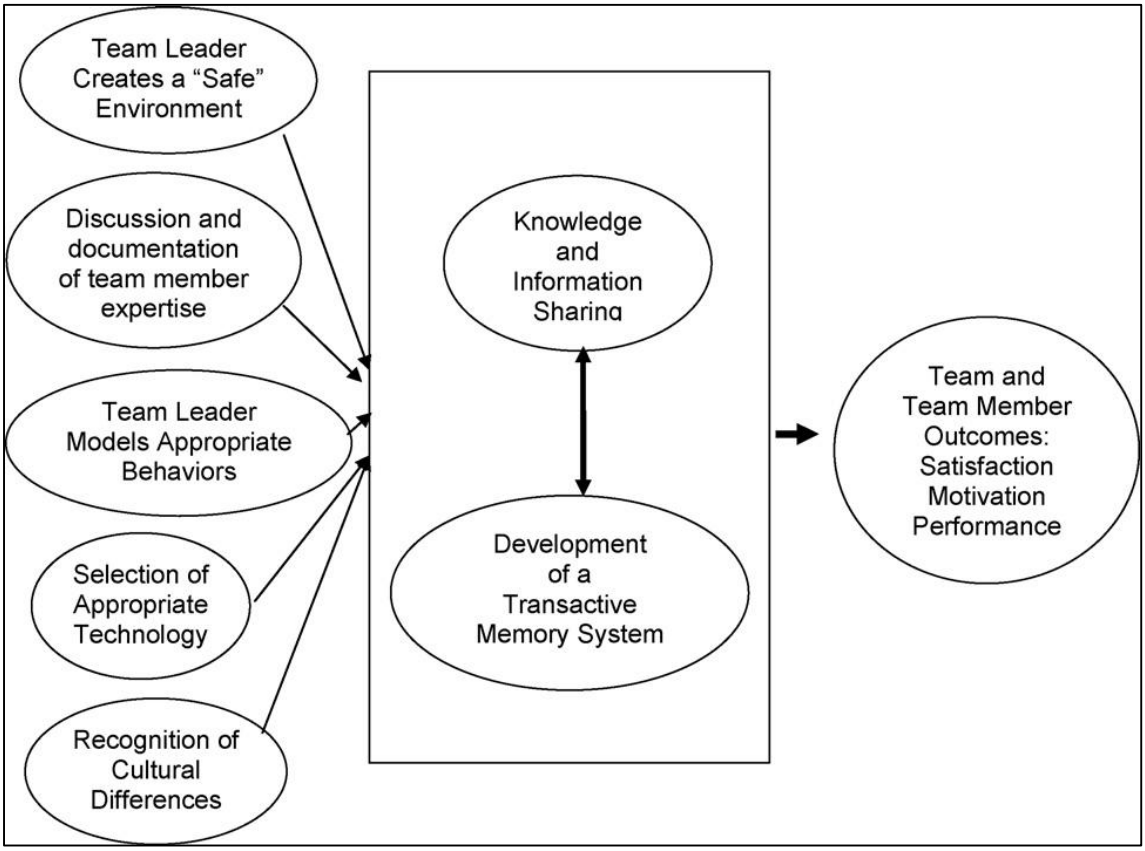

Figure 4. Model of information and knowledge sharing in Virtual Teams (Rosen, et al. 2007, p. 271)

Work in a virtual team needs some kind of structure and timetable. Project proposals have a deadline when the plan has to be ready. A project plan is clear description of a common goal. A project needs a structure of what the team will do and when, when is time for individual work and when is time for collaborative work. Leinonen, Järvinen and Häkkinen have introduced a model for virtual collaboration (figure 5). There are four phases and the theoretical principles for each. The first phase is the negotiation of the aim of the project. It includes discussion about common ground and negotiation of what will be the shared goals of the team. The second phase is working with the shared cooperative tasks and joint attention at solution-critical times. The third phase is summarizing the project, which engages the participants in goal directed activities. The fourth phase is evaluation of the project where group externalizes the tacit knowledge of the shared working process. This part gives valuable information to participants of what went well and what went not so well during the process.

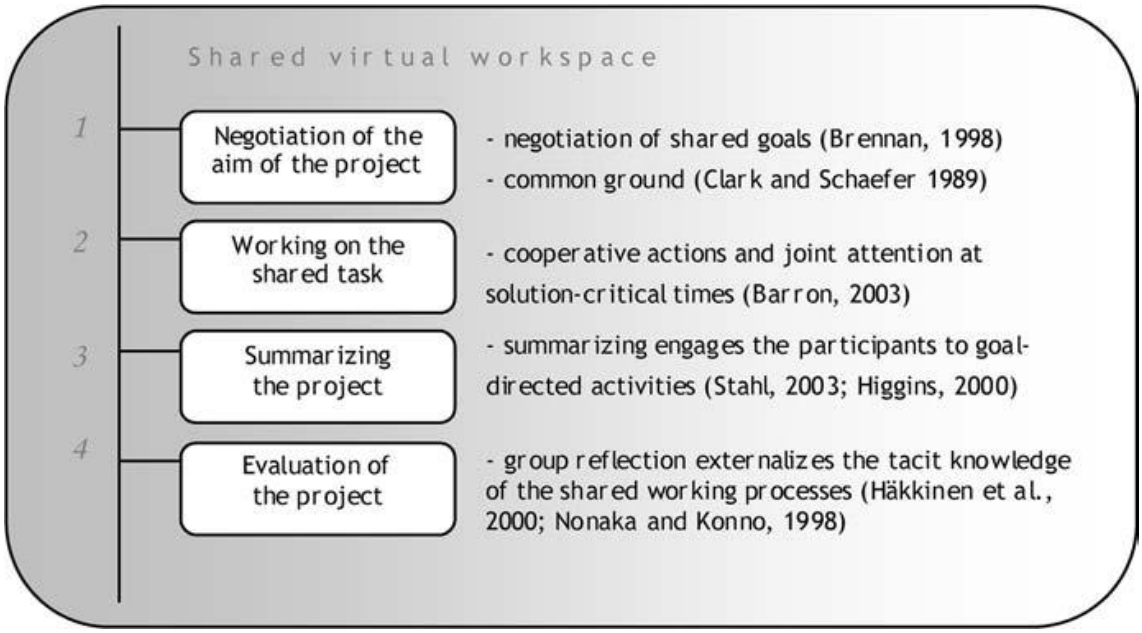

Figure 5. The four phases and the theoretical principles of the working model for virtual collaboration. (Leinonen, Järvelä, & Häkkinen, 2005, pp. 305-307)

Himanen (2010) presents a view of learning culture based on Socrates (figure 6). Philosopher Socrates appreciated very much questions and interaction in learning. Web conference is like a learning process, where every user needs first to feel safe and to have some (self) confidence with own expertise.

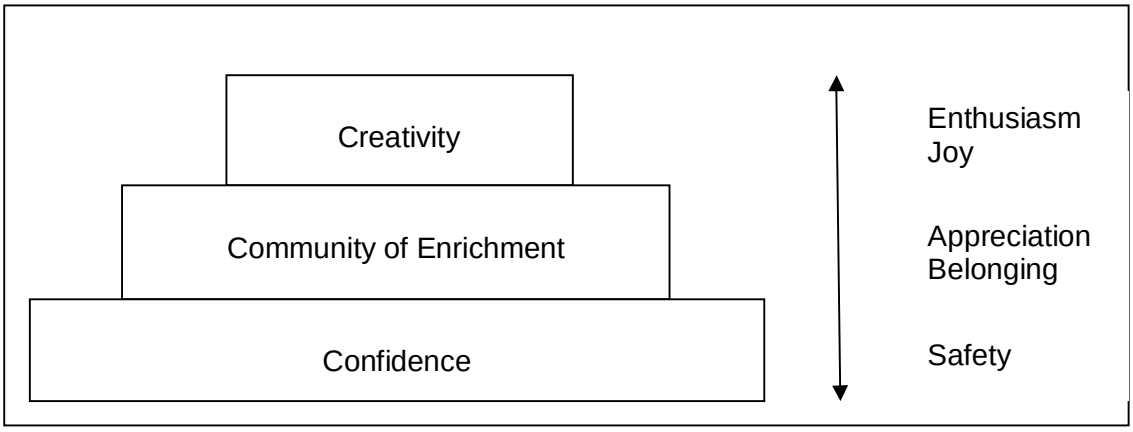

Figure 6. Learning Culture at its best (Himanen 2010, p. 119)

Community of enrichment means respect (appreciation) of each other and giving possibility to made good questions to others. Good collaboration gives enthusiasm and joy to participants. A successful working process results in creativity.

What is creativity? Maybe it is good to first start to look at what is a creative person. A creative person has the ability to see problems what other´s don´t notice. Creative

personality can establish a lot of new, original ideas. A creative person acts fluidly to improve more ideas per time unit than middle level person. He or she is flexible to change his/her thinking or action if needed. (Uusikylä & Piirto 1999, p. 21)

In teamwork creativity requires psychological security. According to Uusikylä there are three dimensions: 1. It needs to accept everyone´s human dignity without qualification. 2. It needs to create a free atmosphere, where are not fear for castigation/criticism. 3. Emphatic appreciation is leading attitude. (Uusikylä & Piirto, 1999, pp. 35-36)

4 METHOD AND MATERIALS

This study was done using so called action research method. It is a method where the researcher is involved in action as an actor and as an observer.

> *Action research is a form of enquiry that enables practitioners everywhere to investigate and evaluate their work. They ask, "What am I doing? What do I need to improve? How do I improve it?"* (McNiff & Whitehead 2006, p. 7)

Action research is a process where researcher is involved in action to observe, reflect, act, evaluate, modify and move in new directions (figure 8)

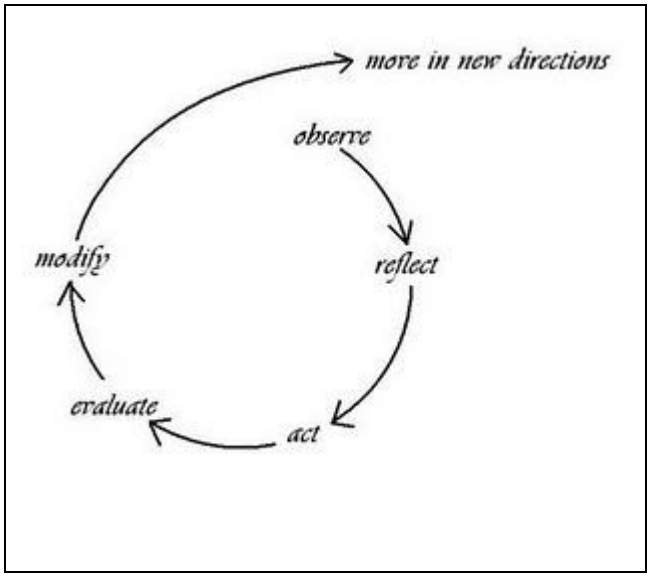

Figure 8. An action-reflection cycle (McNiff & Whitehead 2006, p. 9)

Action research is a learning process where the goal is to make things better step by step. The main goal is development; a wish to do things better than earlier. Thus all parts of the process are important. First to observe: to look how the situation is at the moment. Then, reflect on the current situation, what we can do better. Next act, try to do something better. After that: evaluate, was it better how we done things now than earlier. And finally modify to act the situation so that next time we can use our new knowledge and do something better. (Heikkinen, Huttunen & Moilanen 1999, p. 18)

Action research is collaborative process. It gives possibility to ask questions like: Shall we do this work as good as possible? Is there any better way to do this work? Via

these kinds of questions, action research is a tool for professional development. Good point is that it gives possibility for the whole team to develop their work practices and working theory. This development requires that all are ready to try new ways of working and are ready to change their working practices. (Heikkinen, etal. 1999, pp. 63-65)

Table 1 lists the empirical materials used in this study. The four cases of expert virtual team work took place between 16.11.2007 and 18.6.2008. All ACP conferences were recorded for analysis with the permission of participants.

Advising test	Date	Duration	Users	Country
- test	16.11.2007	0:17:20	2	test advising via distance
Case Interreg	Date	Duration	Users	Country
Pretest	29.11.2007	0:20:09	2	Finland 1, Ireland 1
Pretest	30.11.2007	0:23:47	2	Finland 1, Ireland 1
Pretest	5.12.2007	0:15:19	2	Finland 1, Romania 1
Pretest	5.12.2007	0:14:46	2	Finland 1, Slovakia 1
Pretest	12.12.2007	0:23:36	3	Finland 2, Germany 1
Conference	12.12.2007	1:11:39	6	Finland 3, Slovakia 2, Germany 1
Pretest	17.12.2007	0:19:49	2	Finland 2 (Iisalmi-Seinäjoki)
Pretest	19.12.2007	1:11:51	2	Finland 1, Ireland 1
Conference	20.12.2007	1:34:17	9	Fin 4, Ger 2, Slovakia 2, Ireland (chat)
Pretest	14.1.2007	0:05:18	2	Finland 1, Germany 1 (new user)
Conference	14.1.2007	0:45:54	10	Fin 5, Slovakia 2, Romania 1, Ger 2
2 Conferences, 8 Pretests		6:46:25		
Case Erasmus	Date	Duration	Users	Country
Conference	30.1.2008	0:48:58	5	Finland 4, Slovakia 1
Conference	5.2.2008	1:41:03	3	Finland 2, Slovakia 1
Conference	11.2.2008	2:15:27	4	Finland 2, Slovakia 2
Conference	18.2.2008	0:12:38	3	Finland 2, Slovakia 1
Conference	18.2.2008	0:12:51	3	Finland 1, Slovakia 2
Conference	20.2.2008	1:55:43	5	Finland 3, Slovakia 2
Conference	27.2.2008	1:51:00	3	Finland 2, Slovakia 1
Conference	28.2.2008	0:52:19	3	Finland 2, Slovakia 1
Conference	29.2.2008	1:32:29	2	Finland 1, Slovakia 1
Conference	5.3.2008	2:08:51	2	Finland 1, Slovakia 1
Conference	6.3.2008	1:03:19	2	Finland 1, Slovakia 1
Conference	11.3.2008	0:54:48	2	Finland 1, Slovakia 1
Interview	27.3.2008	1:03:13	3	Finland 3, Slovakia 1
12 Conferences + Interview		16:32:39		
Case Innotool	Date	Duration	Users	Country
Conference	23.1.2008	0:36:36	4	Finland 3, Romania 1
Conference	30.1.2008	1:19:53	8	Fin 2, Rom 1, Italy 2, Hung 2, Bulgaria 1
Conference	20.2.2008	1:37:15	9	Fin 3, Rom 1, It 1, Hung 2, Bulgaria 2
Conference+Interview	19.3.2008	0:57:24	3	Finland 1, Romania 1, Italy 1
4 Conferences + Interview		4:31:08		
Pilot Leader	Date	Duration	Users	Country
Conference	1.4.2008	1:34:59	3	Finland 2, Holland 1
Conference	23.4.2008	0:56:25	5	Finland 5 via distance
Conference	28.4.2008	0:57:18	2	Finland 2 via distance
Conference	6.5.2008	0:05:34	1	Finland 2 via distance
Conference	23.5.2008	2:04:12	8	Finland 8 via distance
Conference	18.6.2008	1:06:06	3	Finland 3 via distance
Conference	18.6.2008	2:10:26	7	Finland 7 via distance
7 Recorded Conferences		8:55:00		

Table 1. List of the recorded ACP conferences 16.11.2007 – 18.6.2008, used as the materials of the study

5 DESCRIPTION OF THE STUDY PROCESS

The study process was organized in four consecutive cycles (figure 9). Below, each case is outlined and the main steps in developing the expert web conferencing are given. The fourth case, called Pilot Leader, was to compile and test the experiences from the three previous cases.

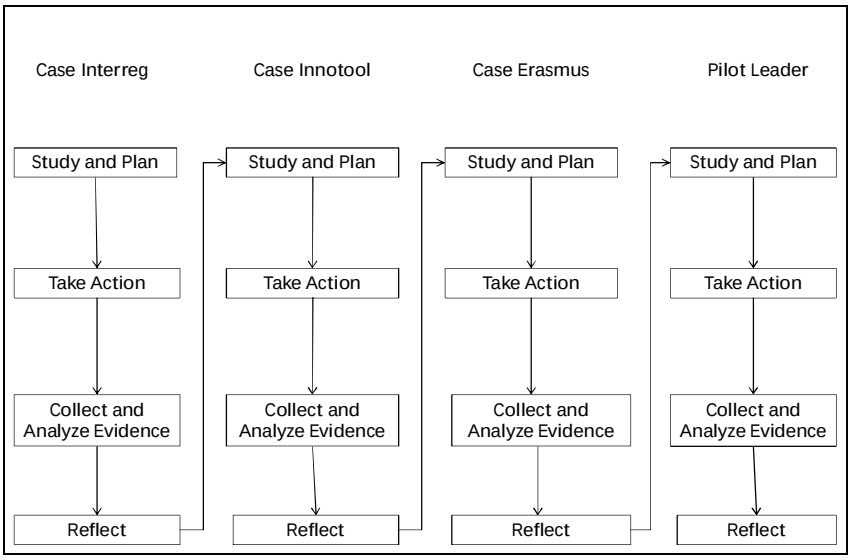

Figure 9. Three cases (cycles) and the final pilot test. Application of the model "Progressive problem solving" (Center for Collaborative Action Research, 2010)

The first step of the study was to define the research problem in spring 2007. Next step was learning to use ACP. It was done by self studying and participating in ACP training courses online and face to face. Third step was to get some kind of understanding how the document management in EU project planning will work and what kind of tools it needs. (Appendix 3)

Collaboration happens between partners in different countries. There are several possibilities to have collaboration. Basic tools are face to face meetings, emails and phone calls.

Document Management needed to save common files and move them from each others to make sure that right papers are in right place in right time. Process Management means different steps in how planning continues, how to make a

timetable for planning, when you need time for common work and when it´s time for partners' independent work.

5.1 Case Interreg

The first case of the thesis was to prepare an Interreg IVC proposal with university partners from Romania, Germany, Ireland and Slovakia. There were three web conferences during the planning process. This case provided information on how to start web conferencing, how to plan the whole planning process, and what is the significance of web conference in a part of whole picture. Figure 10 explains the planning process step by step and shows the chronological location of the ACP conference.

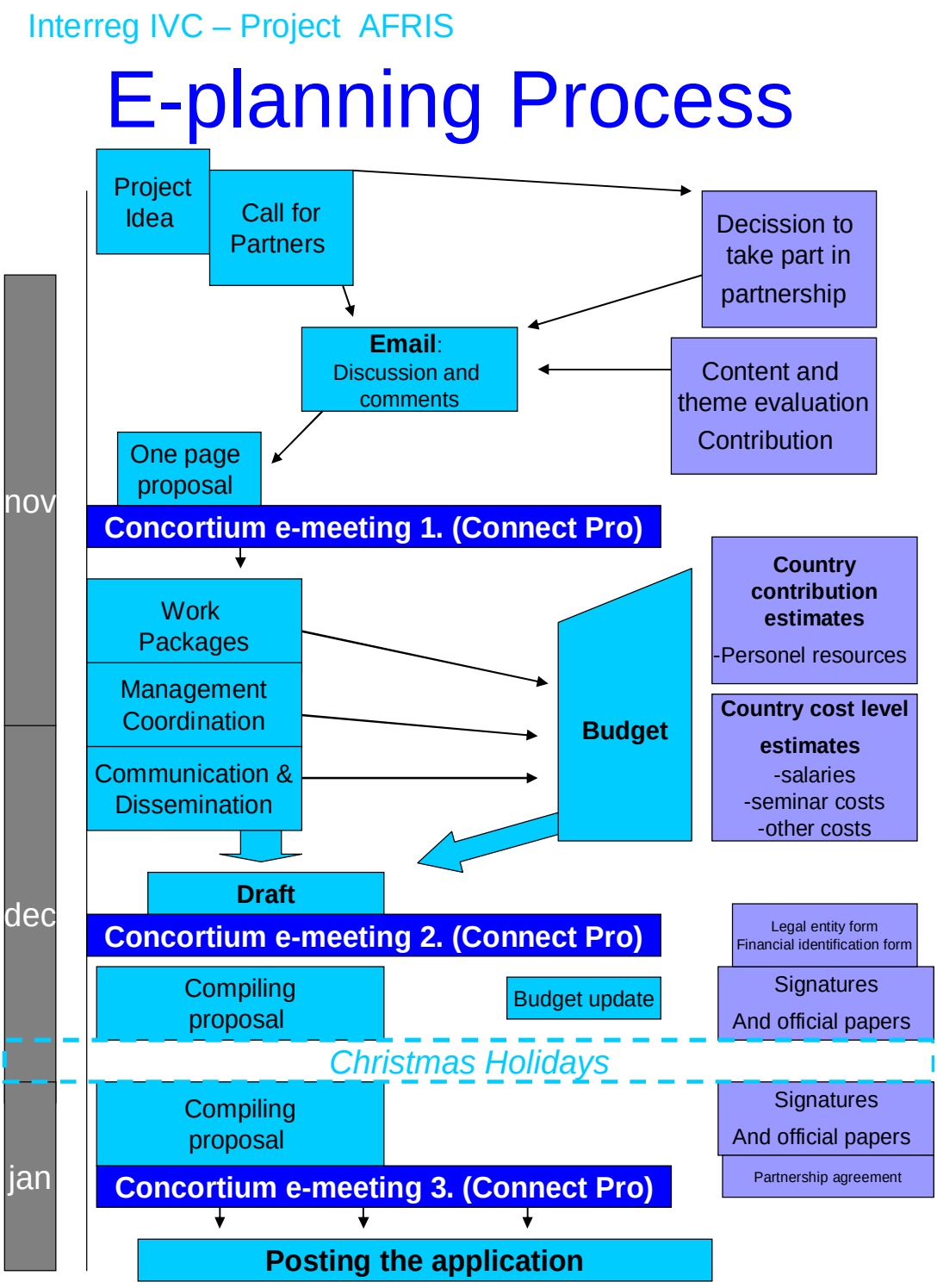

Figure 10. Web conference took place like this in the planning process of Interreg IVC project AFRIS.

Case Interreg started 11.9.2007 when Savonia UAS received a proposal from the National Forest Centre in Zvolen, Slovakia. Interreg IVC program would open soon and

there would be a possibility to start to plan a common EU-project. Savonia UAS agreed with the idea of the project and the planning process started via email.

We proposed that if they agree, we will use the new web conferencing tool, ACP, during the planning process to help the planning and to collect data for this study. Slovakia agreed to this idea.

The first challenge was how to train the other participants to use ACP over the internet without face to face meeting. How to manage this problem? First I had to learn to use ACP so well that guiding was possible. I took part in two face to face ACP training courses and one web training conference. Training included practical training and I read manuals as well. I learned how to administrate the tool itself, for example, how to establish new rooms. Very important was to understand what the role of the host is before, during and after the meeting. I learned how to share PowerPoint and Word documents, how to use pods and how to share your desktop.

Then we started to think in the Savonia UAS project planning team how the web conferencing could be part of planning process? Basic background for the process came from the Interreg IVC Programme Manual (European Community , 2007) and a handout McCarthy (2003). We took some ideas from both manuals and built a basic model planning of process. This gave us understanding of what steps there are in project planning. After this we tried to find the most important times when web conferencing would best serve the planning process. After this work we had a picture of how we will work during the planning process.

Next challenge was how the participants abroad could start to use ACP using only with distant instruction. The second step was to develop the method for a pre - test. We made a test simulation between two computers in Savonia UAS Iisalmi on the 16.11.2008 (recorded at https://connect.savonia.fi/p41905080). The next step was to make an easy PowerPoint material to help to start ACP and had a live meeting with a foreign student who can't speak Finnish at all and had no expertise in web conferencing. This brought a feeling of reality to the first test. I made an easy starting package in PowerPoint and sent this by email to the participants. (Appendix 1)

Savonia UAS has Moodle platform for educational use in own server. Moodle has possibility to plan process, save files and have discussions. Most interesting feature was a possibility to save files so that every partner can browse them and save own files in Moodle too. At same time it´s a good tool for planning process and possibility to have

common discussion so, that everybody can see later too what they have discussed together. The main idea of using Moodle was that it provided a good platform to share documents and have a discussion between ACP meetings.

Moodle helped us to really understand that project planning is a process. But, also Moodle was a new tool for other partners. Moodle needs user names and passwords. These two points needed training by distance. In the end, the decission was to abandon Moodle and use email for document management, because it is familiar tool for everybody. (Appendix 3)

29.11.2007 was the first real test in Ireland. It was challenging. I used telephone, PowerPoint and ACP for the test. The Irish partner logged in to ACP, but audio and video didn't work, even chat didn't work. Only a note pad worked and this was the part of ACP which was in common use so that we both could write there. So we used telephone and note. It was rather demanding for me to try to find what the problem was. We continued the test the next day but the result was the same, no better than the first day. Later on I checked the situation from the server provider and I heard that the probable reason was that our partners had a too old computer and a slow wireless internet connection.

The other problem with the Irish partner was that because of holiday time he had limited possibilities to get technical help from his organisation. I noticed that it is important to propose to the partner that they reserve a technical support person for a technical test. The information which I got at the same time was that in international work it is very important to notice that in different countries there are different holiday times which create a problem for the working process if you don't notice these differences beforehand.

The other problem we noticed because I sent an email to the participant and asked when they have a possibility for a technical test. This method was limited because of lack of email answers. I talked about this problem with my colleague and she said: "why don't you call", because her experience of people who are busy is that a phone call is more effective than email. After this discussion I noticed that it is easier to start a pre-test while talking over the phone. During the first phone call it was easy to ask when a suitable time for test would be, do you have a headset and camera ready and is there a possibility for technical help, for example to install the latest Flash Player version to the computer.

In 12.12.2007 was the first all partners' web conference. The Slovakian partner's video and audio connections worked well. Other partners had different problems. The German partner's video connection worked well but audio connection didn't work at all, so he logged out of the meeting. The Finnish partner from Seinäjoki came late to the meeting and his video connection didn't work because of a lack of a camera but the audio connection did work, the only problem was that the voice was low and a little bit difficult to hear. The partners from Romania and Ireland didn't attend the meeting at all. Romania had some technical problem but they sent material to the conference and it was possible to share this document during the meeting. I noticed that the pre - test is very important before the first meeting in order to avoid technical problems.

During the meetings there were some problems with changing the pods. ACP was new for everybody as well as to the host. The method was really learning by doing.

One basic method we used was that the agenda of the meeting was sent to the participants via email before meeting and added to the note in ACP as well. Our idea was to use the agenda during the meeting so that one participant had a secretary role and he/she wrote minutes to the agenda. We noticed that this was a good method because this meant that the agenda changed role during the meeting and because of the adding onto of the agenda there were minutes after the meeting. The good point of this was that when the secretary wrote minutes for the agenda pod it helped everybody to read what the participants had discussed. This helped to understand conversation if there were some misunderstandings or hearing problems during the meeting. The other good point of this was that everybody could check that there is a consensus about decisions and so be surer of what the result of the meeting was. The result was that the consortium sent an application to EU on 15.1.2008. A questionnaire related to the study was sent (appendix 4).

Main steps during case Interreg

- creating a model how to help users start to use ACP via distance,
- the confusing experience of the first meeting showed how important it is to make a good plan to the web conference,
- creating a project e-planning model (figure 10)

5.2 Case Innotool

The second case was the planning of the Innotool Intensive Programme course (Erasmus Intensive Programme/LLP) with partners from Romania, Italy, Hungary and Bulgaria.

This case started in January 2008 between Savonia UAS, Finland, and partners from Romania, Italy, Hungary and Bulgaria. There were several meetings in this process. The good practises which had been learnt from the first case were now used again. The author was involved in the meetings too. In the end the author sent a questionnaire related to this study via email to the participants (appendix 5.).

The case had five web conferences plus test conferences.

- Planning web conference in 23.1.2008, four participants
- Email with technical guidelines (HowToUseAdobeConnectPro – attachment file) to participants and then connection with a test call if necessary (appendix 1.)
- The second web conference was in 30.1.2008 with eight participants. Agenda was sent before the next meeting via email and presented in ACP, too. Minutes from the conference were made during the conference so that everybody could see and check what decisions were made. Minutes were sent immediately after the web conference via email to participants so that they could continue working with it in their own organisations.
- Web conference on 20.2.2008, nine participants. Curriculum planning for the intensive course. Decision making.
- Web conference on 19.3.2008. Summarizing the project. In the end of this last meeting, there was an interview between with participants by using Humap`s questionnaire (appendix 5)

Main steps during case Innotool that added to our knowledge of expert web conferencing were:

- Testing of the model how to help users start to use ACP via distance
- Understanding how important is the possibility of sending notes/minutes from the conference immediately after conference to the participants, so that

they can continue the work in their own organization. This enhances work efficiency.

5.3 Case Erasmus

The third case was planning an international project for the Life Long Learning program (Erasmus Intensive Program course) with the Technical University of Zvolen, Slovakia. The case started in January 2008 between Savonia UAS Finland and the Technical University of Zvolen Slovakia. The process was the same as in the second case. Good practises were used from both the first and second cases. Difference here was that there was an interview via web conference after this case. The interview was recorded and lettered as text.

The main steps during case Erasmus that added to our knowledge of expert web conferencing was:

- to see how intensive, creative and successful a process is possible via ACP

5.4 Case Pilot Leader

The final, fourth case is called Leader. It was different from the three other cases, as it was not international and working language was native tongue of the participants.

The Pilot case started in May 2008 with the Finnish Rural Network unit Seinäjoki and a national Leader Action Group. In this case, all the good practises which had been found out before were used. The Chairman and the Secretary of the meeting were informed about how a web conference is different from normal face to face situations. Every participant had the possibility to test how the web conference works technically before the meeting. New in this case was that the Chairman and the Secretary planned carefully how the meeting would go, what the practices are during the web conference and they got advice on how to activate every user to give their own opinion to benefit the web conference for common use. In the end, feedback was collected by interviewing and via email. Extra point in this case was that we used the participatory method in web conference. This idea is from ITK conference 2008, presented by Anu Pruikkonen, Kemi-Tornio University of Applied Sciences and Katri Auvinen, Innotiimi. (A.Pruikkonen, S-I. Vaara, M.Mathlein & K.Auvinen 2008).

The method of participation used in Pilot Leader web conference was:

1. Introducing the method and give the task. 5 min
2. Every participant thinks first of his/her own solution to the problem. 5 min
3. Participant call on the phone a designated other participant. They create a suggestion for a solution together. 15 min
4. Each pair writes their solution to a note pod and presents it to others. 15 min
5. Discussing and creating together a common solution based on the groups' proposals. 15 min

Main steps during case Pilot Leader that added to our knowledge of expert web conferencing were:

- Seeing that participatory method gives more efficient working
- Showing that the process outlined in this study works satisfactorily

6 RESULTS

6.1 Case Interreg

The following presents the knowledge gained from this case. The quotations in italics are comments from the participants in the web conferences.

Working model of virtual collaboration	Case Interreg
Negotiation of the aim of the project - negotiation shared goals - common ground	Before first web conference via email and in the first web conference all agree goals. Personal introduction in web conference.
Working on the shared task - cooperative actions and joint attention at solution-critical times	Mostly participants individual work and via email with coordinator. Key decisions together in web conference.
Summarizing the project - summarizing the project	Third conference: last decisions and summarizing the project
Evaluation of the project - group reflection externalizes the tacit knowledge of shared working processes	Evaluation of the project made by email questionnaire (Appendix 4)

Table 2. Comparing Case Interreg to Leinonen, Järvinen & Häkkilä (2005) working model for virtual collaboration

The objective of this case was to find the technical challenges in using ACP, cultural differences between participants, experiences in using second language, attitudes towards information technology, knowledge sharing during the web conference and empirical benefits in using web conferences.

From a technical point of view, many participants reported several kinds of difficulties with hardware. For example, lack of voice or slow internet connection, as well as a problem with firewall. Also a lack of new Flash Player was the kind of problem which requires help. Almost all users solved the problems easily after counselling from the organizer or from their own data expert.

It would be reasonable to say that before the first official meeting, it is a good practise to organize a personal test with the user so that she/he can test settings, so that

everything is in order with hardware and connections. Good guide material (appendix 1 and 2) via email with a possibility to test ACP with support helps users.

Conclusion is that if you are going to organize an ACP meeting and users will use ACP for the first time, be sure that there is technical support available. From an international context it is important to notice holiday seasons and lack of technical support during those times.

You could underline the importance of a personal test by calling by phone to the participant before the first meeting and recommend testing ACP together before the first meeting to be sure that everything works well. There should be the possibility to teach basic good practises in how to use ACP in meeting.

> "*Otherwise all the time and energy will go to these technical problems."*

Many problems were with settings and practises in use.

> "*How to install camera and headset into the computer, how to put camera and voice on, how to adjust the picture and voice, how to use notes, how to share documents, how to stop."*

From a cultural point of view of the meeting participants feel that there was too many issues on the agenda. If there are lot of issues then they propose to split it into two meetings.

> "*The roadmap for the meeting should have been given more thought"*

A conclusion is that pre - planning needs time to make agendas clear and try to find core themes to discuss. Prefer to choose more meetings than one long meeting.

Decisions were made as one user explained

> *"Everyone has the chance to say his/her opinion and then the most supported suggestion was the decision*."

Decision was mostly made by audio. Chairperson's role was to hand over the turn to each member. Before the meeting some 'big' points have been discussed by email. It is possible to ask participants and their organisations introductions before meeting via email.

> "*direct discussion is always better than E-mail or telephone - its much easier and quicker to share ideas and express own needs or*

> *requirements - so I think that also decisions were made easier and faster thanks to our web conferences."*

Role of the chairperson is important, not only during the meeting, but also before the meeting for planning how the meeting will go and how long it will be.

There are some possibilities for technical problems. One user had problems because the line kept breaking. It´s wise to write a decision at the same time when they have been made. Then everybody could agree the result twice, first to hear it from chairperson and then they can read it on their own screen.

Possibility to have audio connection helps explain complex issues and gives possibility to put a question if needed. This helps to make a faster decision process.

Users feel that the atmosphere in web conference was good. Web meeting opens a new kind of feeling.

> "*It was good to be able to see other people's faces. Also it was obvious from the smiles, laughs and body language that the participants were enjoying the contact and the conversation"*

A disadvantage was that somebody felt that techniques disturb the feeling, for example when there was a problem with audio and it was not possible to hear others.

Maybe we can say that when techniques work well, there is a possibility to create same kind of atmosphere as in a face to face meeting. Body language is of benefit for the meeting. Other point of view is that technical problems could easily break the feelings. This is good reason to do as much as possible to avoid these problems as mentioned earlier. In an international project meeting, the agenda will be demanding enough without any technical disturbance.

Most users had some kind of experience in using same kind of programs earlier. Half of them had used Skype. We can presume that those experiences have helped them in orientation of use of ACP.

The third question concerned language. Did they understand each other's speech all the time, does the platform help to follow the meeting and do they rely on other help during the meeting.

English was the second language for almost all users. Some users had problems in understanding because of lack of skills, and needed repeating for help to understand.

Other problem was in understanding different accents. These two problems are more about questions relating to personal skills.

Using web conference offers some help with these problems. In online situation you could ask to repeat if you don´t understand something. Good practise is that there is good agenda where is clearly written what we are going do decide about. After discussion, the secretary writes the decision to a note pod so that everybody can see and read what is going to be the common decision. If there has been some misunderstanding it is still possible to open that point and discuss it once more so that it is sure that everybody understands what the common decision is.

Last but not least, you can use during the web conference all resources what you have in your own computer, like internet translator, or you can ask some people to come and give support to you during web conference.

Other points of view are the technical problems like sound level, delays, and audio quality like resonances or breaking lines. These can be stressful. Solutions for these could be good testing and training. The secretary can also help to follow the meeting by writing clear minutes during the meeting. Also it is possible to write down own comments to the chat if audio doesn´t work.

Users think that the agenda, notes and chat help very much. You must avoid putting too much information at the same time, because if you at the same time are taking care of meeting maybe you lose something important from notes. This requires good planning before the web conference. It makes clear what the most important information is and which is not.

Mostly people didn´t use any other help during the meetings. One user said that a better prepared agenda will help with the language problems and so lessens the need for that kind of help.

All users had a positive feeling for ACP. They described it this way: ACP is easier than videoconference; effective way to discuss with people who are abroad; good tool; great idea which will work best after at least one face to face meeting where confidence and trust has been built, so the ACP will support face to face meeting; good way to inform each other and good for decision making for big points; cheap; amazed; saves time and money.

Experience of using ACP changed the attitude web conferencing a little bit towards more positive.

> "*Experience was better than I supposed"*

> "*First I was very enthusiastic for web conferencing, but now I understand that it's important to study the platform, test the technical issues and prepare the agenda carefully. It's not easy tool, but it's efficient."*

All users were willing to use web conferencing tool such as ACP later on. Almost all users thought that web meeting is a suitable method for them. Somebody thought that more training is needed.

> *"If the points are more clear and if we discuss real problems, the method will work."*

Users thought that web conference changed a little bit their understanding concerning Interreg project. Their point was that after meeting, they have better understanding of how the situation can be different in other countries.

Below, the pros and cons of email and web conferencing are listed as expressed by the participants in this Interreg case.

Email - Pros

- *Fact giving, questioning, clarifying things, simple, clear communications*
- *E-mail was the better way to discuss special questions …*
- *In e-mail you can thing more about content*

Email - Cons

- *We can pass and forget the e-mails to easy*
- *Working through e-mail only is very limiting*
- *Email is tiresomely slow, sluggish way to communicate*
- *It is difficult to ask questions to clarify things*.
- *Also it is very difficult to really understand what the writer means in his/her communication*

Web meetings - Pros

- *Exact meeting time*
- *Fast and efficient*
- *The only advantage in our case was to see the partners and to get a 'feeling', or let me say: a level of understanding – not more!*
- *You see a partner, you have results of discussion immediately*
- *It gives an opportunity for participants to directly discuss and share ideas, while they are in distant places.*
- *Ideas are passed to all partners immediately, and also spokesperson knows that everybody in the audience is getting his/her information*
- *It is also more time-efficient than writing or reading e-mails.*
- *Everybody can react directly.*
- *It is perhaps the best choice if face to face meeting is not possible and more people need to discuss a complex topic together.*
- *You can communicate more than in email (when you see the face, or you are able to explain more)*
- *You save time and money*
- *To dot quickly the vagueness situation*
- *To discuss up front about some problems or disagreement or misunderstanding*

Web meetings - *Cons*

- *Sometimes even too efficient, and you barely have time to gasp for breath between following and contributing to dialogue*
- *Problems can occur if internet connection is lost, or too slow, or if there are other technical problems.*
- *Perhaps it was difficult to express an intention to speak.*

- *We lost some time with technical problems, some interruptions in voice*

Commitment or enthusiasm point was important. Users feel that web conferencing gives more enthusiasm or commitment to the planning compared to sole email contact. This is an added value in web conference.

> "*One is taking the contact and common agenda for more seriously than if the contact is restricted solely on email correspondence."*
>
> "*You never know who had read your emails"*
>
> *"It's very important from "human side" to see people that you communicate with. It perhaps helps people to create closer or more informal relationship, what is in my opinion important point for working group. That is good for stronger enthusiasm or commitment."*

Users think that web conference is the closest alternative for face to face meeting. Face to face meetings are needed but between them web conference is good substitute.

> *Quite authentic. From 1=none to 5=extremely, I'd say 3,5.*

One user thinks that the feeling in a web conference was same in a face to face meeting.

6.2 Case Innotool

The outcomes from case Innotool are listed in table 3.

Working model of virtual collaboration	Case Innotool
Negotiation of the aim of the project - negotiation shared goals - common ground	Curriculum
Working on the shared task - cooperative actions and joint attention at solution-critical times	Coordinator and partners
Summarizing the project - summarizing the project	Coordinator make a conclusion after listening to the partners
Evaluation of the project - group reflection externalizes the tacit knowledge of shared working processes	Evaluation of the project made by interview (Appendix 5)

Table 3. Comparing Case Innotool to Leinonen, Järvinen & Häkkilä (2005) working model for virtual collaboration

Participants felt that the usefulness of the meeting for them was very good.

> *"Because of course the opportunity to stay speaking and discussion all together in the same moment make things easier with respect to change in email or try to have phone calls or this other kind of discussion ways and I also find that it is very useful in the opportunity to share program files and PowerPoints that all together have in front them the subject we are speaking about and it is very very useful. Finally I can say that instruments in this meeting were very good or very important. Good 5*. (scale 1 to 5)"

Most useful was the quickness of the discussion and possibility to make notes at the same time.

> *"It was just like being in the same meeting in the same place. You could write step by step what we were talking so at the end and also during the meeting we could have every moment memorised what was the argument and point the discussion and after meeting we have report ready*."

Participants felt that all was discussed what needed to be discussed. All information necessary was found which was surprising. They were satisfied and confident, and felt that it was like a face to face meeting, especially if there were only three participants. It was important to use different tools to have presentation with different documents during the meeting. Getting agenda before meeting via email for preparing is helpful.

6.3 Case Erasmus

Virtual collaboration in the case Erasmus is described in table 4.

Working model of virtual collaboration	Case Erasmus
Negotiation of the aim of the project - negotiation shared goals - common ground	Project Application before deadline. Common ground appears during intensive process.
Working on the shared task - cooperative actions and joint attention at solution-critical times	Shared knowledge by using many web conferences and participants individual work. Key decisions together in web conference.
Summarizing the project - summarizing the project	Shared result, Project Application, summarize the project
Evaluation of the project - group reflection externalizes the tacit knowledge of shared working processes	Interview via web conference(Appendix 6)

Table 4. Comparing Case Erasmus to Leinonen, Järvinen & Häkkilä (2005) working model for virtual collaboration

Participants felt that their first experience with ACP web conferencing was good.

> "*the first time I was looking forward to using this software solutions because I guess that it will be much more better, quicker and faster and with more interesting outputs from the planning process and yes, It was much more easier then work with our projects then."*

> *"Introducing process was faster than face to face put it was enough and it was easy then jump to subject."*

Even though the personal introductions were short, the participants became very familiar with each other during the process.

> *“I think very well, because introducing process was part of each connecting to our planning process. It’s coming more and more from each to each familiar of each others during the process.”*

Participants felt that shared understanding was reached well because of two elements: text and voice.

Trust was considered basic feeling and important for both working online as well as face to face meetings.

> *“You have to have trust these people how they work with or go with. Without trust you can’t do it. So that´s the basic thing, but then the level of trust was very high level for our co-operation and that was very good feeling.”*

> *“My point was that we have co-operation with user 1 that if I could not understand immediately what user 1 meant and I still have trust that he has reason of this text and I can trust that it is reasonable and have to be there. That was level of trust. You trust that it is important what people proposed there.”*

Users felt that they could share tacit knowledge well. ACP offers a wide variety of tools for knowledge sharing like video, audio, text in chat and note, file sharing and screen sharing. This is more than in a normal face to face meeting.

These tools give good background for an effective learning process. When you have trust with other users, you are free to share your tacit knowledge with them. This is the first step in learning from each other. The next step is starting to build new knowledge together.

A new project plan is a good example for new knowledge. There is a lot of old tacit knowledge, but it´s not enough; you need to create something new and innovative together with other participants. It seems that this is possible by using ACP for international meetings.

> *“But I think that user 2 has many services from last projects and using new tools of a how students and teachers can communicate and how to have new outputs with each other and make more modern for us and it comes from old knowledge and user 2´s experiences.*”

Trust in the other participant´s knowledge was at a good level. Trust is an important feeling for effective working both in face to face meeting and web conference. It´s interesting how user 1 from another country feels a high level of trust for other´s knowledge even if he hasn´t met anybody of them face to face.

> *"Very good knowledge. I can't measure it. I think that all the proposals were very progressive and very effective for our project. I wasn't measuring it during the time, but measuring was part of the project part of the thinking when we have completing. I think that each kind of idea was good knowledge for the project."*

Making this new knowledge together is a process. This process needs good interaction between participants. When we are working in ACP it requires that our pc works, internet works and ACP works. We need knowledge to use ACP. This is one part of the meeting. An advanced user can help novice users. Technical support is a good start.

Effective interaction needs other kind of support too. You give support to others and get support from others. This gives possibility to build new common knowledge together. This kind of supporting interaction could be the core thing in successful project planning.

> *"Support was each kind of preparing process, so go for the text, sign some ideas, sign some mistakes there are in the text, support was to find the time for the conversation, support was the thing about ideas after the discussion, maybe during some other process so support was everything what help us to go to the end and preparing process, each kind of step was the support to completing the process. Everything was the support. Support was exactly using ACP software solutions. That was great support."*
>
> *"This few point it was successful, because we complete project*."

A supportive attitude gives positive feeling for working. Positive feeling gives more joy. More joy gives possibilities to have more creative atmosphere. Creative atmosphere gives possibility to find new, innovative ideas. The result is a virtuous circle which gives better results.

> *"We could continue with other projects in future. Result is whole project for one month and weeks maybe. I learnt to use this ACP, it was the other result*. *Fourth main result for me was to learn how to prepare some kind*

of project. Fifth main result was used language how to repeat all the grammar, how to understand the others, how to explain what I meant."

"I only add that we like to create a new working method when we are planning that application. That was something new. Actually we developed it together."

Users felt honoured and proud both for the process and the result. They thought that they can use this experience as a good practice later on. When asked: "What kind was the final result if you compare it to process with the face to face meetings?" user 1 answered 90-100 % and user 2 didn't see any difference. This means that they were really satisfied with the result. Result was good and they save lot of time and money.

User 2 mentioned that all the time they did hard work in ACP, so they used time in a very effective way. Also knowledge sharing worked well: Both users felt that they learned from each other. They felt that they were motivated to work, because it was important work and others were professionals.

Video has an important role as user 1 said; he saw the other users face, so that he had motivation and it gave motivation to him too. These all created a good, constructive working atmosphere.

Users' didn´t notice any cultural differences between users from different countries. Only thing that was mentioned was the differences in use of English or differences of personality. User 2 summarizes the experience of using of ACP very well:

"ACP meetings are easy, handy, very useful, save money, saves time and we make real cooperation with this tool." (User 2)

Users were satisfied with the process and want to continue cooperation later on. The only thing missing still; it was taste of other country's food and beer, someone joked.

6.4 Pilot Leader

The Leader case was finally used to wind up the lessons learned in international contest and to test the whole set-up of expert web conferencing in a national and native-tongue setting (table 5).

Working model of virtual collaboration	Case Pilot Leader
Negotiation of the aim of the project - negotiation shared goals - common ground	Planning with Secretary and Chairman and agreed together. Everybody knew each other earlier.
Working on the shared task - cooperative actions and joint attention at solution-critical times	Active participatory planning during web conference.
Summarizing the project - summarizing the project	Chairman summarizes all steps and secretary wrote it down into minutes.
Evaluation of the project - group reflection externalizes the tacit knowledge of shared working processes	Questionnaire via email (Appendix 7)

Table 5. Comparing Pilot Leader to Leinonen, Järvinen & Häkkilä (2005) working model for virtual collaboration

The importance of early preparation has become clear and it is worth reserving enough time for this. The limit of human concentration should not be exceeded by long meetings. The topics need to be very exact and well-prepared before meeting. Users felt that essential in a web conference are the role of the chair whose job is to give the floor and keep the whole conference under control. The role of the chairman is perhaps more focused than in a face to face meeting. The planning of the meeting and setting of targets has to be better than in face to face meetings. More concentration and anticipation is required from the chairman.

The participants in case Leader commented the process as follows:

> *"Web conference requires more correctness and taking into account of other participants than in a traditional meeting"*

> *"Yes, the results have corresponded to planned objectives. In the meeting we progressed well, better than in a normal meeting"*

“It is easy to got concrete results, maybe easier than in face to face meeting”

Meetings should not be very long. Many small meetings are better than one long meeting. At the maximum one hour meeting is good, because the web conference lacks refreshment breaks. Phones have to be closed, as web conferencing needs good concentration. The price quality relation of web conference is one of the best. Savings in time and travel costs are clear.

Users felt that they got their opinion across in a good way in a web conference. Some of them thought that they got their opinion across maybe even easier or better than in a normal meeting. This means that their opinions have been noticed well in decision making.

One user reported problems with internet connection. The connection was cut off from time to time.

Users felt that the web conference result was good and they benefit for it as well as in normal face to face meeting. They felt that the decision making process was clear because of a good chairman who summarized well, and because in the end they could check the decision in a memo which was written during the meeting. They felt that the web conference will work better in small groups (under 10 people) than with big groups. Web conferences need more work and practice from the chairman and secretary than in a normal face to face meeting. Time planning is important: Participants prefer more meetings and fewer points on agenda. Two hours is too long for a web conference.

Users were satisfied about meeting like these two comments show:

An unusually workable meeting. Definitely the most compact meeting I have attended for a long time.

Best meeting for years!!!

7 CONCLUSIONS

The objective of this study was to answer the question how to manage interaction in international web conference. The three specified study questions were

1. What circumstances are needed for a successful web conference?
2. Is a web conference as effective as a face to face meeting?
3. How to successfully facilitate a web conference?

The objective of the study was met satisfactorily, although there were some difficulties in translating the large sets of communications and observations into concrete results. Here are the conclusions of the study, related to web conference technology, efficiency optimally available, and managing expert interaction in a virtual team. The third point is finally formulated into a web conference model with 12 steps. New tools like Adobe Acrobat Connect Pro will give new possibilities for internationalization as well as for distance work.

1. In successful web conference every user needs a rather new computer with headset and web camera. It is important to test the ACP connection before first meeting with technical support. It is important that conference is well prepared before meeting. Effective meeting need to be max one hour long.

2. Web conference can be as effective as face to face meeting. It seems that sometimes it can be even more effective, when the conference is well prepared and well facilitated. Technical problems are a risk, counter-balancing the efficiency potential.

3. It is important to plan the conference well and send the agenda beforehand to the participants. It is good to write the agenda in more detailed than in face to face conference with proposals for decisions, if possible. From the facilitation point of view, participatory methods are good. There is a possibility to use participatory group work during the conference, to get every participant’s creative ideas and to have more effective results. These lessons learnt give a model with steps for managing interaction in international project planning in web conference. This model will work best for web conferences with 3 - 10 participants:

Before web conference

1. Make timetable for the project planning process to be used in the web conference
2. Plan the agenda with chairman and secretary before the web conference. Be sure that there are not too many issues on the agenda. Notice that effective meeting can only be for one hour long.
3. Send the agenda before the web conference to the participants via email.
4. Make the web conference room ready before meeting with the agenda and chat.

Give “First aid” service for users who use ACP at first time

5. Send email with ACP-guide to participants before meeting.
6. Call the participant and ask:
    a. When it is good time for testing and training for him/her?
    b. Do you have a headset and camera ready?
    c. Is there a possibility for technical help?
7. Test the ACP with the participant personally and show the basic tools.

During the web conference

8. Start the meeting. Make sure that everybody hears well and is heard also. Put the recording on, if it is necessary and if all agree.
9. Tell the rules of the web conference that everybody knows what to do.
10. The secretary writes the minutes by using the agenda (note pod) so that the participants can see and read what the decision was.

After web conference

11. After the web conference, send the minutes immediately via email to the participants so that they can continue working with it. You can add the address of the web conference recording to the email too.
12. Clean the web conference room so that it is ready for the next meeting. This is a security aspect too.

One very interesting finding during this process was the method of participatory planning. This will give new, very interesting points of view towards effective time-saving meeting methods. There are many possibilities to develop later on these kinds of methods, applicable to different kinds of meetings.

This study has found answers to the study questions. A method how to manage interaction in international project planning process has been found.

To the question: “are the web conferences as effective as face to face meetings”, I would say that yes. Surprise for me was that in some cases I got some answers where representatives think that web conference could be even better than face to face meeting. Not only because of saving time and travelling costs, but also because the used method is effective for decision making.

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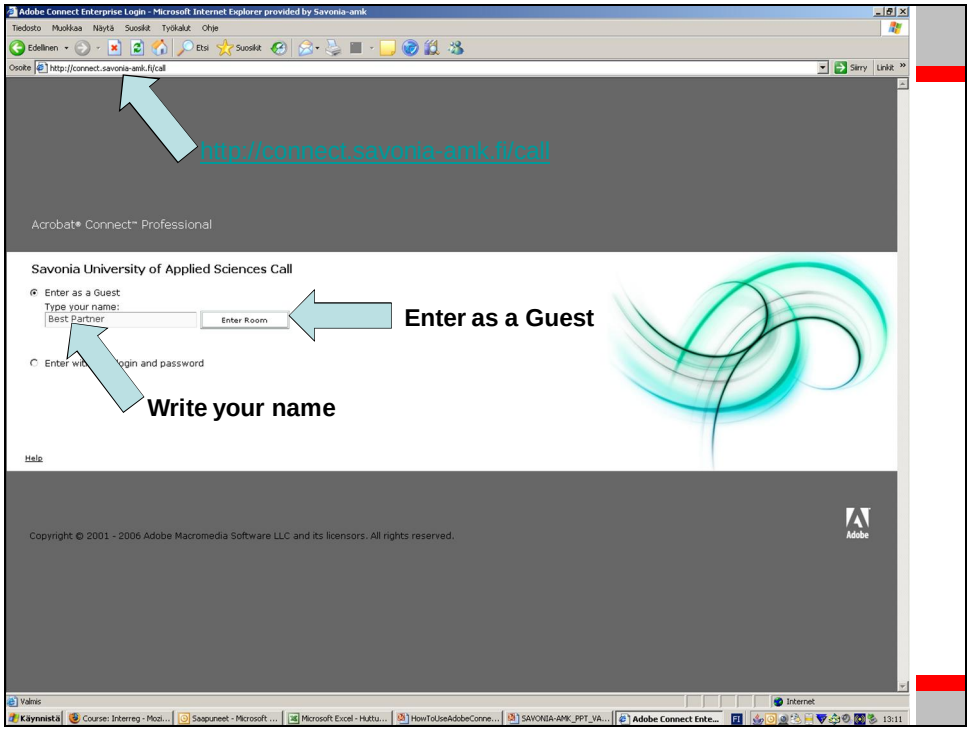
Appendix 1. Guideline material: How to start using Adobe Connect Pro

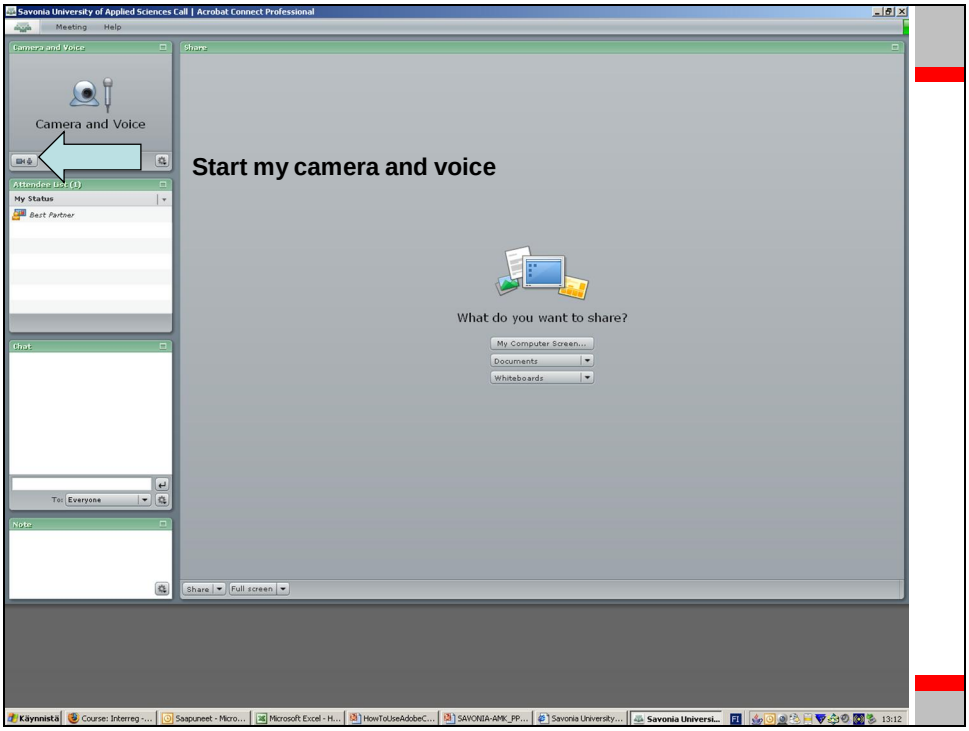
Savonia
University of Applied Sciences

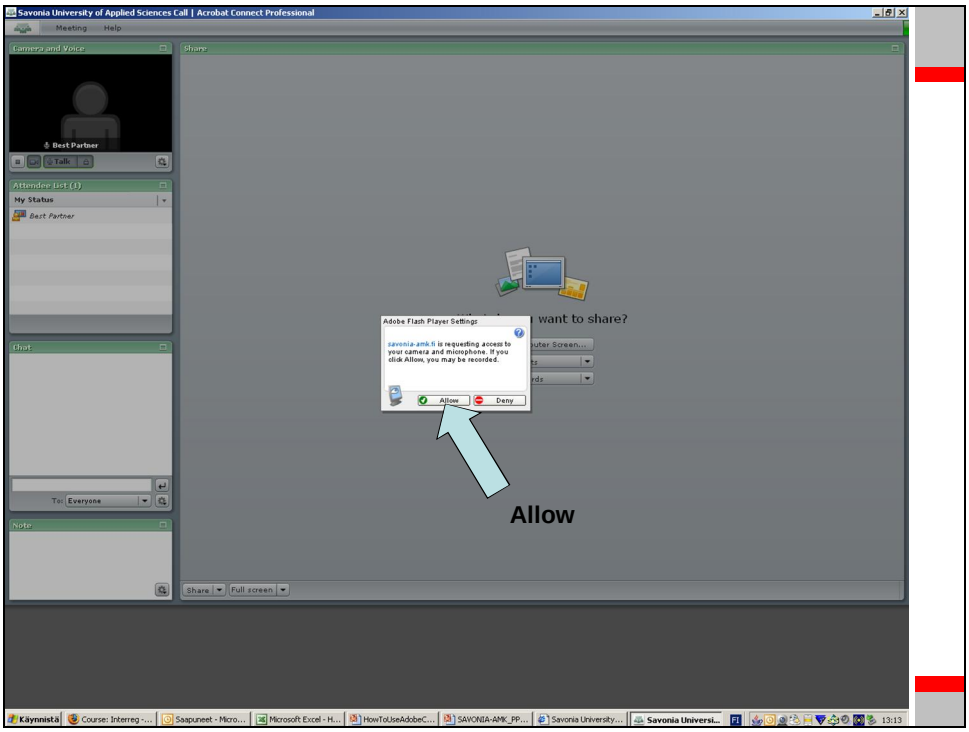
How To Use Adobe Connect Pro

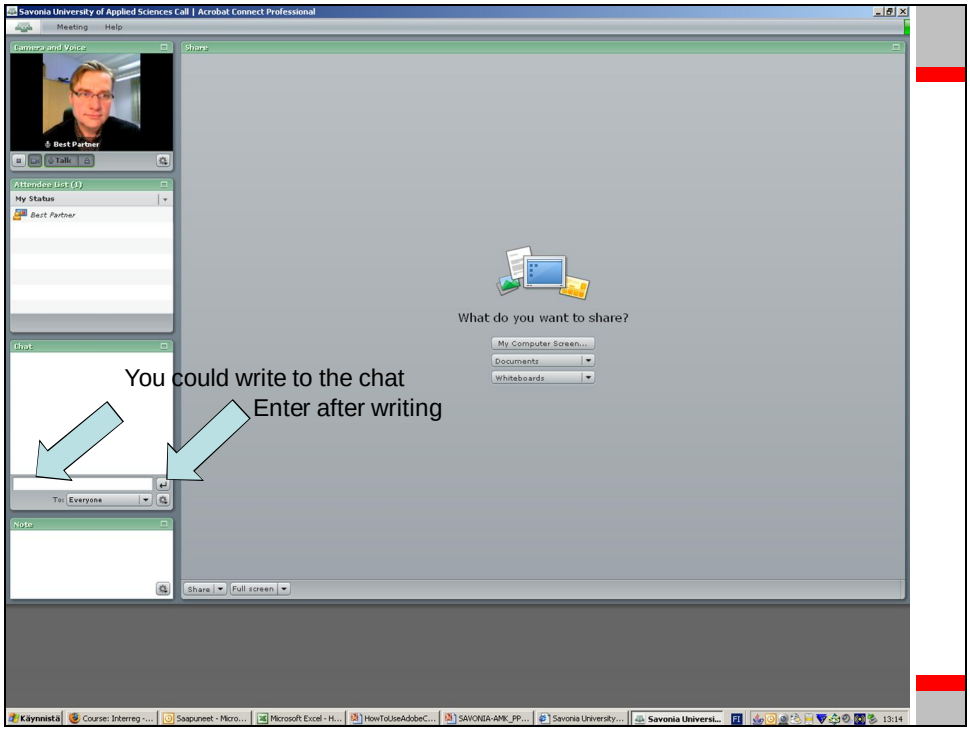
- Computer (PC-Mac-Linux) with Internet access
- Headset help you to communicate
- Web-camera give extra feeling for meeting

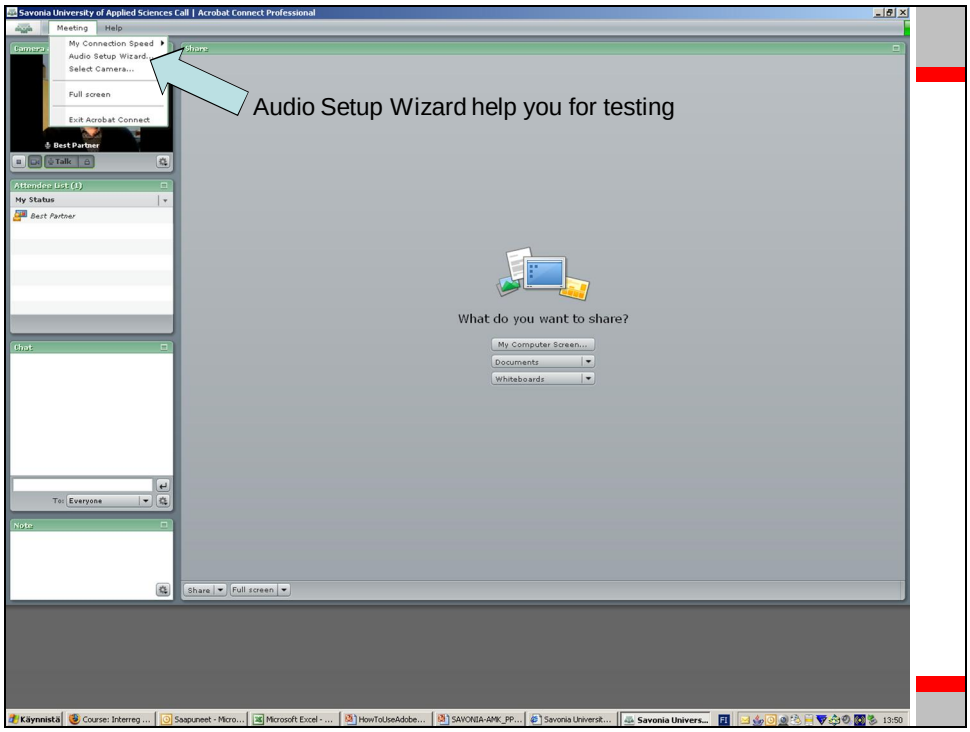
- Please go to the http://connect.savonia.fi/call
- To log in write your name and Enter as a Guest
- click ”Start my camera and voice”
- click ”Allow”
- You can write to the chat, click ”Enter” after writing
- ”Audio Setup Wizard” from Meeting menu help you for testing the audio




Savonia University of Applied Sciences Call | Acrobat Connect Professional
Meeting
Help
Camera and Voice
Share
Camera and Voice
Start my camera and voice
Attendee List (1)
My Status
Best Partner
Chat
To: Everyone
Note
What do you want to share?
My Computer Screen...
Documents
Whiteboards
Share
Full screen


Savonia University of Applied Sciences Call | Acrobat Connect Professional
Meeting
Help
Camera and Voice
Share
Best Partner
Talk
Attendee List (1)
My Status
Best Partner
Chat
To: Everyone
Note
Adobe Flash Player Settings
savonia-amk.fi is requesting access to your camera and microphone. If you click Allow, you may be recorded.
Allow
Deny
Allow
Share
Full screen


Savonia University of Applied Sciences Call | Acrobat Connect Professional
Meeting
Help
Camera and Voice
Share
Best Partner
Talk
Attendee List (1)
My Status
Best Partner
Chat
To: Everyone
Note
What do you want to share?
My Computer Screen...
Documents
Whiteboards
Share
Full screen
You could write to the chat
Enter after writing


Savonia University of Applied Sciences Call | Acrobat Connect Professional
Meeting
Help
My Connection Speed
Audio Setup Wizard...
Select Camera...
Full screen
Exit Acrobat Connect
Best Partner
Talk
Attendee List (1)
My Status
Best Partner
Chat
To: Everyone
Note
What do you want to share?
My Computer Screen...
Documents
Whiteboards
Share
Full screen
Audio Setup Wizard help you for testing

Savonia
University of Applied Sciences

I hope that everything went well!

- **Please, don't hesitate to take contact to me if you have any question:**
- **Email ilkka.pekkarinen@savonia.fi**
- **GSM + 358 – 44 – 785 6662**

Appendix 2. Technical email to participants before first Adobe Connect Pro meeting, Case Erasmus

Hi all

Greetings from Finland! I will help Project Coordinator to establish web meeting by using Adobe Connect Pro web conference tool. I know that one of you have already used it but what about the others?

Adobe Connect Pro web conferencing tool is easy to use from your own computer. I will help you to start to use it. I'm sure that the web conference will helps us to plan Innotool-programme.

Before the meeting it is very important to test the connection. The test is possible for me Thu, Fri, Mon and Tue from (about) 9.00 to 14.30 (Helsinki-Bucharest time)

For testing you need:

- Computer with Internet access
- Headset with microphone
- Web camera (sometimes cheap web camera without microphone is better)
- Internet-connection to the address: https://connect.savonia-amk.fi/innotool
- Flash player 9 installed. Free installing http://www.adobe.com/products/flashplayer/ .
Please note, that maybe you need administrator rights to install it in your computer. Please ask technical support in your organisation.

Please, let me know when you are ready to test the connection.

With Best Regards
Ilkka

Appendix 3. Process with document management

1. Basic idea
- 2-3 sentences
- schetches: PowerPoint, log frames, mind map
- preliminary consortium (who are planning, partners-to-be?)

2. Funding resource
- Interreg
- Links to funding programs, available documents, frequently asked questions…

3. One page proposal
- summary of the project idea

4. Consortium meeting 1
- Via Connect Pro
- based on chapters 1-3 (every users have passwords to Moodle and they have already read the previous material)

Aims of the meeting
- adjusting technical details Connect Pro (maybe beforehand test with all users)
- willingness to participate (yes/no)
- ideas for further development the project idea
- feedback, commitment the project

5. Work packages
- Discussion area for each work package/activity
- partners interests and knowledge resources concerning activities
- alternative ideas for realizing activities (best practices)

Management and Coordination
- agreements available (consortium, partner, letter of intent)
- legal/financial entity forms (pre filling)
- content information (substance expert, financial expert/secretary)

Communication and Dissemination
- new ideas for approaching publicity
- local dissemination networks/medias (compiled)

Budget

- summary of the budget conditions (self financing, regulations etc VAT)
- cost-levels from different countries (form of salaries, rents, travels, seminars)
- budget from each country

6. Consortium Meeting 2

- Via Connect Pro
- consensus of Basic issues
- pass (continue) /fail (back to chapter 5)

7. Compile Proposal

- Focus on linguistic form
- wiki – solution for common writing process?
- final signatures
- budget checking

8. Consortium Meeting 3

- Via Connect Pro
- approval for submitting proposal, everybody agree
- informing details (how to inform after decision)

9. Submit Proposal

- post stamp
- deadline!

Appendix 4. Questionnaire Case Interreg

This is the evaluation form for web conferencing tool Adobe Connect Pro that we were using during our Interreg IVC planning process. As you know, the questionnaire is part of my Master thesis.

The purpose of these questions is that your answers are suggestive for continuing my research. Therefore all ideas and suggestions are important.

Please, answer the questions below. You can answer them directly or bring new ideas and suggestions for the approach. Your opinions are highly valuable for the research!

Technical

1. Was it easy to start using Adobe Connect Pro?
2. What kind of difficulties did you have?
3. Did you understand easily how to solve those problems?
4. Did you need or did you get help for technical problems?

Cultural

1. Agenda of meeting. Where there a) Not enough issues in the agenda?
b) Enough issues in the agenda? c) Too much issues in the agenda?
2. How were the decisions made during the Adobe Connect Pro meetings?
3. How was the atmosphere?
4. Have you used other web conferencing tools beforehand?

Language

1. Did you understand the speech of other participants all the time?
2. Did the text on the platform help you to follow meetings? (chat, agenda, notes)
3. Did you rely on other help during the meetings?

Attitude

1. How do you feel in general about web conferencing?
2. Did this experience change your attitude towards web conferencing?

3. Are you willing to use a web conferencing tool such as Adobe Connect Pro later on? If yes, what kind of a situation could be?

Knowledge sharing

1. How did the web conferencing change your understanding concerning AFRIS project?
2. Is this kind of working method suitable for you?

Benefits (compared to email or face to face meetings)

1. What kind of advantages and disadvantages did you have if you compare working only through email?
2. Did the web conferencing give more enthusiasm or commitment to the planning compared to sole email contact?
3. How authentic was the feeling if you compared to face to face meetings?

Please send answers before Jan 25, 2008.
Thank you very much for your time and considerations!
All answers will be handled confidentially and anonymously.

Best Regards
Ilkka

Appendix 5. Questionnaire Case Innotool (Vital Project, 2008)

Results from the interview:

1. Asks the participants to assess the usefulness of the meeting to them using a scale from 1 to 5 and explaining this with a few words.

2. Asks a participant to choose who he/she would like to hear by asking:

- What has been the most useful thing you have heard in the meeting?

3. (Facilitator) asks a participant to choose who he/she wants to hear by asking:

-In what you have heard in the meeting, what has been different, maybe even surprising?

- How has hearing this influenced your own thoughts?
- Who may possibly have a different view of the usefulness of the meeting?

4. Ask the participants to assess; using a scale from 1 to 5, how confident they feel in regard to the progress of discussed topics before the next meeting.

Appendix 6. Questionnaire Case Erasmus 27.3.2008

1. What kind was your first feeling with ACP-meeting (Adobe Connect Pro)?
2. How was introducing with other participants?
3. How familiar you became with other participants during the meetings?
4. How was common understanding during the meeting?
5. How was trust for each others?
6. Was it possible for you to share tacit knowledge with the other participants during the meetings?
7. How good knowledge the other participants have?
8. How do you support the partners working?
9. Was this support successful?
10. Does the working process produce joy to you?
11. What kind was result for the process?
12. Are you honoured (proud) for the process and the result?
13. What kind was the final result if you compare it to process with the face to face meetings?
14. Did you learn for the others? Examples?
15. What give motivation to you?
16. How was the working atmosphere?
17. Were there cultural differences during the meetings?
18. Please summarize your experience about ACP-meetings?
19. Is there something else what do you want to say in the end?

Appendix 7. Questionnaire Case Pilot Leader 18.6.2008

1. Hearing: Have you experienced that your opinion has noticed in decision making?
2. Realization of targets: Have the results of meeting met up your planned objectives?
3. Benefit: Do you feel, that you have received good, beneficial information from the other attendees
4. Feasibility of decision making and collaboration: Do you feel that you could commit to decisions made in meetings?
5. Anything else?