Communication in International Distributed Research Projects: Experience from an EC Project

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Outline

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- Literature review
- Communication in an international setting
- Results: Lessons learned from managing international projects
- Conclusions

Introduction

• Project is a planned undertaking of a series of related activities to reach an objective that has a beginning and an end

Research objectives

- Presents success factors in project management in an international setting
- Discusses communication characteristics
- Links these characteristics to recent research
- Present our experience and findings related to an EC project

Literature review

- Organizations pursue co-operative research for several reasons
- Share knowledge (focus on strengths and develop relationships)
- Financial motivation: Share risk and pool funds
- But share knowledge is the most often cited motivation, and surpasses financial motives (Brockhoff and Teichert 1995)

Success factors for distributed project management

Two surveys discussed CSF in distributed projects leading to increase project success

- European Commission (2003) discussed communications projects receiving partial funding from the European Commission
- Suits and Caskey (1999) focused on projects funded by the participants themselves

Success factors for distributed project management

- Based on past studies, the two survey categorized CSF for distributed project management in term of importance into:
 - Management factors: Are related to leadership of project manager
 - Communication factors

CSF: The management factors

- 1. Have a common vision from the start
- 2. Have a good match between the goals of the individual participants and the aims of the project as a whole. Each task is a sub-activity in the whole project
- 3. Develop effective means of communication
- 4. Share a clear understanding of the project anticipation of potential problems (potential risks), and having the means to deal with these in place before these occur (risk management)

CSF: The management factors (Cont')

- 5. Write a *consortium agreement*: Is a document that describes what the goal of the project is, what each participant needs to deliver, and what the procedures will be used to resolve conflicts
- 6. Develop an *Intellectual Property Rights* agreement: is a document that describes what each partner brought to the project, and how the property developed can be used

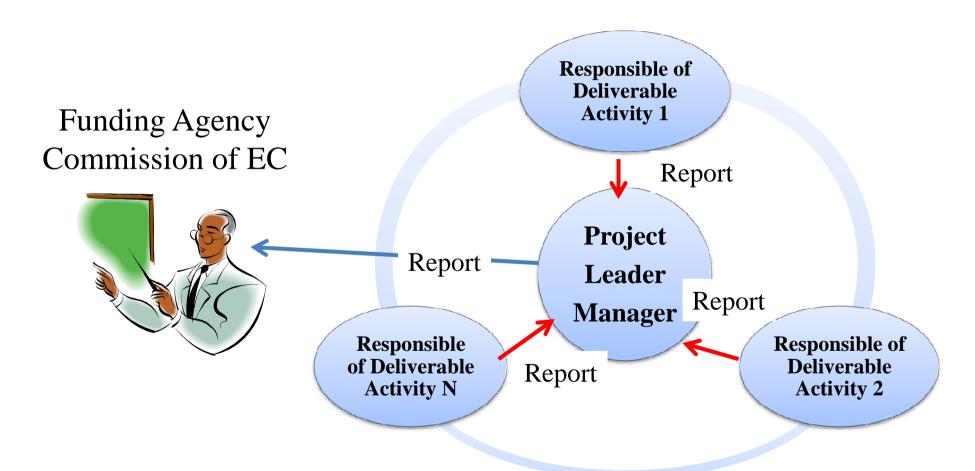
CSF: The communication factors (Cont')

| Critical success factors (Suits and Caskey 1999) | Frequency |
|--|-----------|
| Listening and communicating well | 14 |
| Enhance communication to improve | 9 |
| relations with partners | |
| Hold frequent face-to-face meetings. | 8 |
| Mutual objectives are matched | 7 |
| Knowledge and passion | 5 |
| Mutual respect | 4 |
| Adapt to different cultures | 4 |

Additional problems

- The project manager is responsible to deliver the expected work to the funding agency (EC)
- But has little management authority over the participants employed by other business or government entities.
- This makes project communications, especially from project management to participants in the project, more difficult and more crucial.

Additional problems (cont')



How to overcome these problems?

- Solution proposed CEC report: face-to-face meetings may be the best way to deal with the problems it identifies... → can be expensive
- New technologies have become much more widely used since the CEC document was written: e-mail, SMS, instant messaging
- This study will discuss how to increase ICT communication effectiveness, both independently (between participants) and in combination with project meetings
- But first we need to discuss the characteristics communication

Link between characteristics of Communication and somme Communication dimensions

| Communications | Characteristics of communication | | | | | |
|------------------------------|----------------------------------|---------------|---------------------|----------------------|----------------------|---------------|
| methods | 1- Direction | 2-Number | 3- Synchronicity | 4-Active/ Passive | 5-Social Presence | 6- Urgency |
| 1-Visit | \Leftrightarrow | 1-to-1 | S | Push | 1 | 1 |
| 2-Meeting | \$ | M-to-M | S | Pull | 1 | 1 |
| 3-Telephone call | \$ | 1-to-1 | S | Push | .7 | 3 |
| 4-Telephone conference | \$ | M-to-M | S | Pull | .6 | 4 |
| 5-Video telephone conference | \Leftrightarrow | M-to-M | S | Pull | .7 | 4 |
| 6-Fax | \Rightarrow | 1-to-1 | A | Push | .4 | 6 |
| 7-Email | \Rightarrow | 1-to-1,1-to-M | A | Push | .3 | 8 |
| 8-Web page posting | \Rightarrow | 1-to-M | A | Pull | .3 | 9 |
| 9-Letter | \Rightarrow | 1-to-1 | A | Push | .2 | 7 |
| 10-Web newsgroup or forum | \Leftrightarrow | M-to-M | A | pull | .3 | 10 |
| 11-Newsletter | \Rightarrow | 1-to-M | A | Push | .1 | 10 |

N.B. Values for some of these measures are subjective, and reflect the opinion of the author

What effectiveness communication means?

- Effectiveness of a communication system is the **fit** between the **characteristics of the task** and **those of the communications methods** (Kahai and Cooper 1990)
- Social presence and media richness theory dominated the effectiveness (King and Xia 1997)

What effectiveness communication means?

• Media richness theory (Daft and Lengel 1984)

- Ability of a medium to express certain types of information
- Rank of communication methods (high richness to low): face-to-face, telephone, email, written documents

• Kahai and Cooper (1990) proposed a model of four dimension

- Time delay: Delayed communication stores the message for later retrieval by the receivers
- Language type: transmit natural languages
- Communication configuration: how many users are involved in a communication
- Number of messages: How may exchanges are required to complete a task

Preferred Media according to King and Xia (1997)

• Classification based on analysis of 11 communication tasks in a single company using 9 communication media

| Rank | Ranking of communication for | Generating new ideas / |
|-----------------|----------------------------------|------------------------------|
| | exchange of routing information | brainstorming |
| 1 st | Phone | Group meeting (F-2-F) |
| 2 nd | Face to face (1to1) | Face-to-face |
| 3 rd | Email | EMS |
| 4 th | Group meeting | Phone |
| 5 th | Voice mail | Email |
| 6 th | Fax | Fax |
| 7 th | Note | Note |
| 8 th | Electronic meeting systems (EMS) | Letter |
| 9 th | Letter | Voice mail |

• But setting limit its usefulness in international distributed

Summary

• Communication effectiveness is the fit between characteristics of the communication method and nature of tasks

• Now we will discuss the nature of tasks in international project environment

Communication in an international setting

We can consider two main tasks required in international projects

- Technical tasks: are related to how to carry the specific tasks fixed in the project by management, to evaluate new ideas, communicate new knowledge, and ways to distribute information to member participants
- Managerial control: is principally concerned with how efficiently and effectively resources are utilized and how participants are performing.

Required communication in an international setting

| Technical tasks vs. Management control (Kahai and Cooper, 1990) | | | |
|---|---------------------|----------------------|--|
| Characteristics of | Technical tasks | Management control | |
| communication | | | |
| Time delay | Delayed | Real time (possibly | |
| | | delayed) | |
| Language Type | Natural and special | Natural (though some | |
| | purpose languages | manager use jargon) | |
| Number of messages | Few | Few to frequent | |
| Communication | Many with Many | One [to or with] [| |
| configuration | | Many or One] | |

We can observe that characteristics of communication between the two tasks often differ. It would be reasonable to believe that the best methods to support such communication would also differ

Required communication in an international setting (cont')

- Management communication: is important in any project
 - Manager communicates with its subordinates seeking reactions for a specific task use different configurations:
 One to One, One with one, Many to one, One with Many, Many to many, and All with all
 - Co-operative management tasks may be delayed
 - May often require few messages to solve problems
 - Participants use natural languages (not technical)

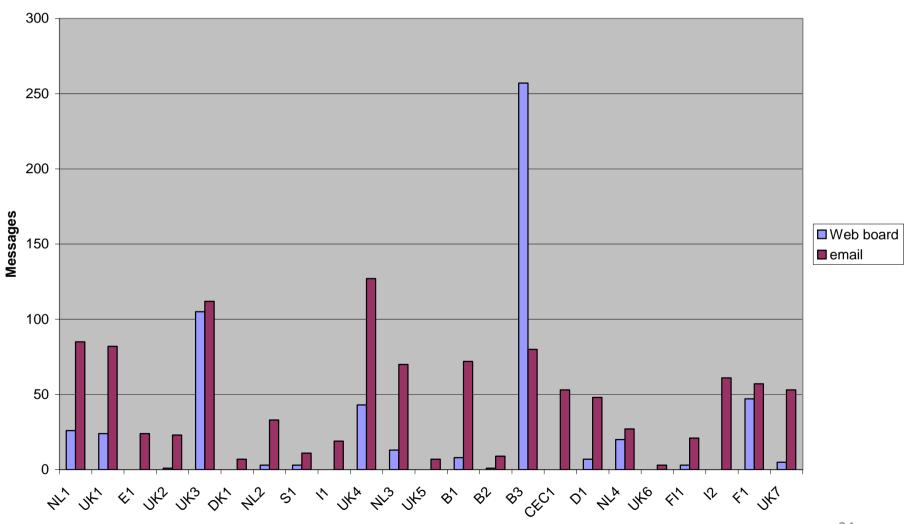
Results of communication methods used in an international project

- Project title: World Class Standards Network (WCSN).
- Period: two years with
- Budget: €2.170.000
- Number of partners: 11 partners from Europe: Netherlands (NL), United Kingdom (UK), Denmark (DK), Spain (E), Sweden (S), Italy (I), Belgium (B), Germany (D), France (F).

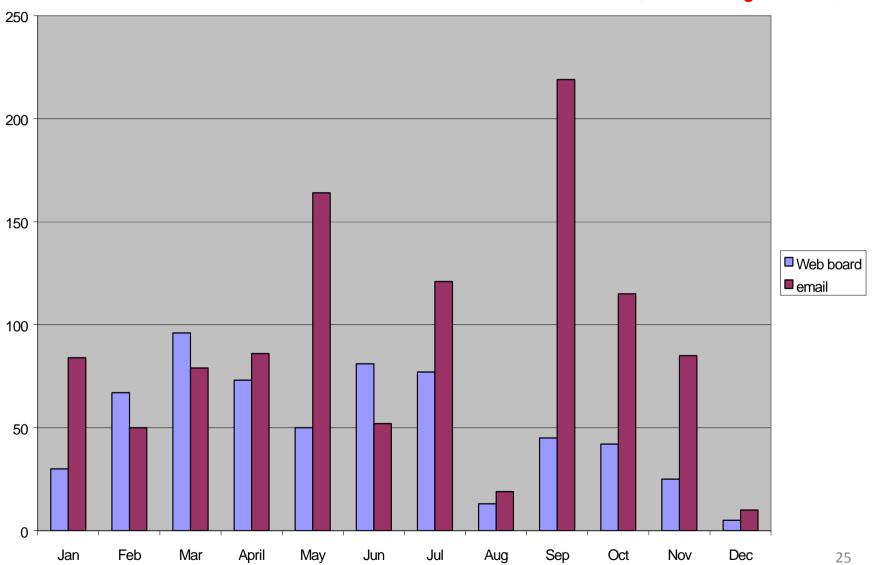
Results of communication methods used in an international project (cont')

- During WCSN, we used many different forms of communication media, coupled with regular project meetings.
- All the 9 communication media were used.
 - Phone, Face to face, Email, Group meeting, Voice mail Fax, Note, Electronic meeting systems, Letter

Communication comparison between E-mail and web board / Messages per project participant (last year)



Number of exchanged messages per month: E-mail vs. Web board ((last year)



Comparison between communication methods in King & Xia and our project

| Rank | Ranking of commexchange of routing = Manager | g information | Generating new ideas / brainstorming= technical | |
|-----------------|--|----------------------|--|---------------|
| | Results from King & | Results from | Results from | Results from |
| | Xia | WCSN | King & Xia | WCSN |
| 1 st | Phone | Email | Group meeting | Group meeting |
| 2 nd | Face to face (1to1) | Phone | Face-to-face | E-mail |
| 3 rd | Email | Fax | EMS | Phone |
| 4 th | Group meeting | Message board | Phone | Message board |
| 5 th | Voice mail | Voice mail | Email | |
| 6 th | Fax | Group meeting | Fax | |
| 7 th | Note | Letter | Note | |
| 8 th | (EMS) | | Letter | |
| 9 th | Letter | | Voice mail | |

The distance fact is apparent, e-mail is the most preferred media and face –to-face communication for idea generation is never used

Management tasks differs from technical work

- Management tasks required speed & clarity
- To get commitment to complete an important task, we found a personal telephone call to be most effective.
- For technical tasks, asynchronous methods has advantage over synchronous.

First speed then urgency

- While speed may be the first consideration for management tasks, it is certainly not the only one.
- If an email, with a relatively low level of urgency, does not provoke the desired response, managers will use media with higher levels of urgency

Cultural fit

- It was hard to manage the project with 11 partners, and we adjusted our choice of communication.
- Email was used for managerial control with partners in the Nordic countries all that was needed; they were driven by the communication content
- Telephone was used partners from Mediterranean countries (Spain), who act more quickly if contacted by telephone (i.e. driven by personal contacts)

Benefits of archiving in communication

• Maintain an archive of email messages in and out establishes a communication record that can be used to resolve disputes quickly or to use it as a work book.

Role of meetings to foster trust teamwork and performance

- Initial, so-called kick-off, establishes personal relationships that can be maintained through other means.
- Periodic meetings can stimulate individual performance

Project phases

- The choice and appropriateness of communication media is also influenced by the four project phases life-cycle. Consider the following project phases: 1, goal agreement, technical work, and wrap-up.
- **Proposal:** project starts as a proposal. We suggest the entire proposal to be generated through email and telephone co-operation in order to cut unnecessary cost of face-to-face meetings.
- **Kick-off:** The partners must meet at least once toward the beginning.

Project phases (cont')

- **Technical work**: it must be supported through electronic communication media.
- Projects funded by or performed for an outside party will be reviewed.
- **Wrap-up:** Once the project is completed, further activities may require further meetings or may be handled in a similar fashion to management control.

Conclusions

From our experience in the WCSN and other projects, we provide the following recommendations:

- 1. Use email as the first communication choice for management control activities.
- 2. Escalate to media with a higher urgency and presence if email does not produce results.
- 3. Provide a web based service, both as a discussion board and as an archive of project documents.

Conclusions

From our experience in the WCSN and other projects, we provide the following recommendations (cont'):

- 4. Use meetings when appropriate
- 5. Prepare video-conferences properly or instant messaging technology.
- 6. Mix Media. Instead of "what is the best communication channel, the right question is "what is the best mix of channels" because often a task will require a combination of types of communication, which is then best facilitated by using a combination of types of communication channel