

Scientific background for IRIS community

I. Introduction

In IRIS business meeting 2015 I was given the task of coordinating a description of the scientific background of the IRIS community. The purpose is to identify from where we came but most important: In which directions we are moving. A task force will be established and my job is to establish and coordinate its work.

Scientific background means theories, problems, domain and methods used. There are certain dependencies between them and for instance problems and domain can be hard to formulate in an extensive way.

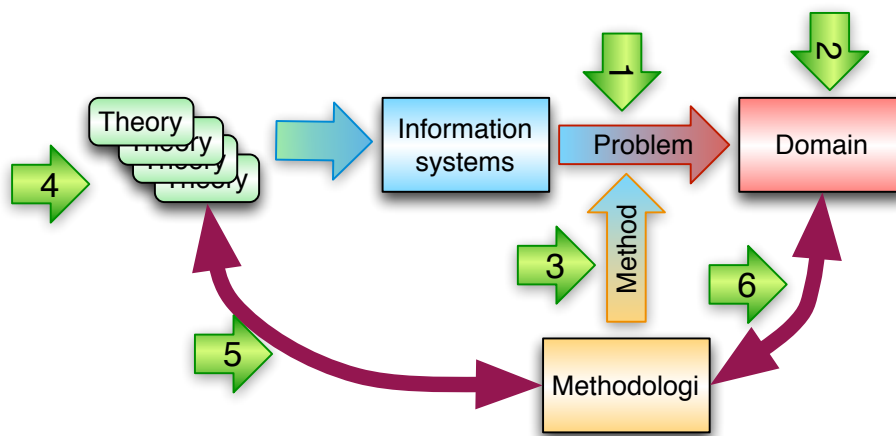


Fig 1. Parts in the scientific background

In Fig 1 I provide a model of the parts in the scientific background. It is partly based on Törnebohm's ((1975, 1983) work, but further developed by myself. In a science, such as information systems, we investigate certain problems, dealing with phenomena in a part of the real world, the domain. Not all sciences study the real world and the study concerns always only some specific aspects of the reality. The investigation is guided by a method, a scientific method. The science is based upon certain theories and the method chosen is based on a methodology¹. The method chosen is dependent on the theories used and the domain investigated. The purple arrows indicate this. The result of the scientific investigation can be one or more of the six green arrows:

1. It can be identification and description of a problem
2. It can be solving a problem in the domain
3. It can be evaluation of a specific method
4. It can be test or construction of a new theory
5. It can identify and describe dependencies between method and theory
6. It can identify and describe dependencies between method and domain

As an example we can take my research about user developed systems, the problem was if the users could develop systems themselves. My domain was systems development methods and I used both case studies and action research. Theories used were a mixture of socio-technique,

¹ "Methodology" should here be understood in its original meaning: "The science about methods" and not in the anglo-saxon meaning of "method".

fenomenology and End User Development. Later I realized the domain should not be systems development but work instead (Flensburg P 2015).

2. Method

The IRIS community is pragmatically defined as those who have submitted papers to any IRIS seminar, SJIS or SCIS. It should correspond to the IRIS mailing list.

The method used will be a mixture of qualitative and quantitative method including collection of data about theories, problems, methods and domain from proceedings from the IRIS seminars, SJIS and SCIS conferences. Proceedings from SCIS and articles in SJIS are all filtered through the eyes of a program committee and therefore some bias might be introduced. The contributions in the IRIS papers mirror best the total opinion of the community, since the acceptance rate is quite high for them. I will suggest we start with them. The ideal method should be for each contribution describe theories, methods, problems and domain used according to Fig 1. As a base for possible theories we use the AIS wiki² over theories used in information systems. The result will be documented in an IRIS wiki and members of the IRIS community can suggest changes, and we hope they share their knowledge and opinions.

The method suggested includes studying every paper of every proceedings from every IRIS, SJIS and SCIS. This requires much work. A reliable result might be achieved by using a random selection. But since our domain have changed considerably I suggest we divide the papers in approximately 10-year periods as follows:

1. 1978-1985: Establishing the area, systems development models
2. 1986-1995: User orientation, Scandinavian school, social-technique
3. 1996-2005: Establishment of Internet
4. 2005-2015: Social media and impact on society

I have indicated some main areas roughly covered during the indicated periods. There are of course no clear boundaries and other researchers might argue I have overseen several areas. The main point is though, that the sample should cover the whole period and the analysis might better indicate periods and content of them. Concerning the size of a sample, I have no idea, but I hope somebody, more skilled in statistics than I can suggest a reasonable sample.

3. Implementation

It's a huge task and requires much work. First we have to collect all proceedings from all IRIS seminars, all numbers of SJIS and all proceedings of SCIS. This might turn out to be impossible, but we will collect as many as possible. If we go for a total classification it will be around 4000 articles that have to be classified. Detailed instructions for the classification are needed in order to obtain high data quality. Assuming every article requires 1 h to read and classify we need 4000 h just to collect the basic data. Students could do this as a part of their master or bachelor thesis, if it could be part of a suitable problem. We might also pay them for doing the work, but it requires substantial foundlings. At University West we will give a master course about theories in information systems and this is a golden opportunity both for the students and for this project to come up with a few analysis and a tested method. This course could be given also at other universities. The descriptions and experiences from our course will of course be available for the IRIS community.

After that we should have a quantitative description of who, where and when has used which theory. The result will be a description of the scientific base from the very beginning up to now.

² http://istheory.byu.edu/wiki/Main_Page

I think it might diverge quite a lot in the last five years. In fact, it might not be possible to define the current and future scientific background for the IRIS community in a coherent way.

It is important that the work is continuously documented and shared, since it will take long time and those who started it might pass away. Therefore the work must be well planned and some persons must be willing to carry it along for at most 10 years. I'm willing to do this as long as my power and brain last, but planning for the future is needed.

4. Some problematic issues

Some issues we have to consider:

1. Shall the proceedings be digitalized from the very beginning? I think it is a good idea if we copy them to pdf-format so they are easy to distribute.
2. Establish a historical IRIS-site. Markku Nurminen started such (<http://www.cs.utu.fi/IRIS/hist.htm>), but it stops 1998. It is important that we keep information of each IRIS, principally the homepage, maybe without the proceedings, since there were some issues with the biometry if the proceeding were available.
3. Oldies, like me, should be involved in the history, but it is important that young people also are involved, both for keeping the interest live for the next generation, but also because they know what are the new trends in information systems.

Problems unsolved:

1. Get all material from all IRIS conferences. I guess there might be some conferences we miss
2. Establish a wiki and website for this project. This could be done within the frame of the IRIS board.
3. Digitalizing old proceedings not in digital format. Unskilled persons could do this in about a week. Something for a paid internship? Some government might support it.
4. Establish a task force group for the work. This is not done yet, but I know several persons willing to take part, so it should not be a great problem.
5. Agree upon the detailed procedure and methods we will use. This is done within the committee and approved by the IRIS board and should not be a big issue.

5. Work already done

The process described above is ambitious and time-consuming but very reliable. However, there are some persons who are retired and have an outstanding knowledge about the IRIS community. I think of persons like Pentti Kerola, Juhani Iivari, Pertti Järvinen, Markku Nurminen, Lars Mathiasen, Ole Hanseth, and many others I can't remember. Therefore it might be a good idea to start collecting their information and involve them in the work of describing the history. Judith Molka-Danielsen et al (2007) wrote a paper about IRIS history up to 2006 and it is further documented in a web-site <http://www.commetrix.de/iris> which give information about the conferences up to 2006. Molka's work however, is mainly focused on the relations between the authors and to some degree on the area of the papers. The focus here will, however, be on the content of the papers. But Molka (2007) identifies the top authors whose contributions might be given a higher weight.

6. Project organization

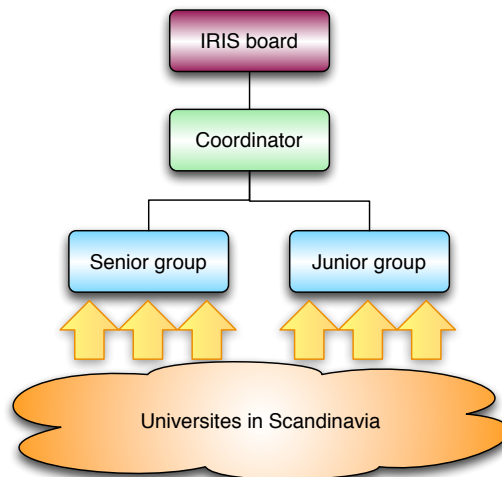


Fig 2 Proposed organization

The suggested project organization is described in Fig 2. It should not be a big organization and people could move in and out. The main work is done electronically so there should not be need for many time consuming travels.

7. References

- Flensburg P (2015). Against users. 38th Information Systems Research Conference in Scandinavia (IRIS 2015), Oulu, University of Oulu.
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