

Computer Assisted Staff Conflict Diagnosis  
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## Introduction

Staff selection has been historically done intuitively by the person in charge, looking mainly to technical and professional aspects. In the past years there has been an important trend to assist the selection process by a psychologist that evaluates capability aspects and skills like creativity, motivation, leadership and intelligence. These aspects, however, do not guarantee that the applicant will accomplish both efficiently and effectively with the assigned job. One of the reasons of staff selection failure is when poor integration between the team and the new member occurs. Studies show that teams that care first about cohesion and then task are more successful than those that are only task oriented. [Wolfe & Box 1988, Yantis & Nixon 1982, Keller 1986]

This vacuum in staff selection has created the need to care about social aspects and relationships between the applicant and his labor environment. To overcome this problem, it would be appropriate to confront the applicant with the team members with whom he will work. Since such task is not feasible, mainly because it requires huge time requirements, computer assistance is therefore an open alternative.

The objective of this work is the design and implementation of a system that supports decisions in the incorporation of new members of a team, through the diagnosis of potential conflicts between the applicant and the team. The system is thought as a tool that supports the psychologist during the staff selection process, by retrieving a list of the eventually conflictive situations between applicant and team. This allows the person in charge of the staff selection to have additional information regarding the capacity of integration to the team that he will be part of, not easily available by other means.

The possible interactions between group members is highly dependent on the context they work on. It is therefore necessary to concentrate in one domain. The work was restricted to analyze groups of 'soft' engineering type of work, i.e. mainly service and management.

This short paper describes the work in progress in the design of such implementation.

## System Design.

A two phase approach is used. First the members of a team that search for a new fellow, are faced one by one with the system, which will show them possible work situations that face a project team. Confronted to each of these situations, the team member will have to choose one of the many possible answers that the system suggests and best represents his thoughts, behavior, believes or feelings. The selected answer determines which situations are applicable to his team and his reaction to these situations. The set of answers of the team determines the conflictive areas present in the team.

In a second phase the applicant is confronted to the same situations. The

chosen answers, by the applicant and the team, are faced to determine the 86 potentially conflictive situations. This list is used by the person in charge of the staff selection that uses it to evaluate if the potential conflict can be contradictory to the team, the applicant and the labor environment.

Such a tool is mainly used by people with no computer background, therefore, its user interface design is also a main issue. The availability of multimedia on PCs allows a rich language that incorporates pictures and sound. Situations are shown much closer to reality which allows the deployment of circumstances that are closer to the specific daily work.

#### Knowledge Acquisition Methodology

The first step of the project is the knowledge acquisition phase, i.e., to extract through interviews daily situations faced in the chosen work environment. Once this task is finished, the situations that really affect relationships between the members of a team are selected. All these is structured forming the potential conflictive situation space. This "search space" defines all possible known conflicts from the defined situations and is used to form the system's knowledge base.

Seven companies were visited. Three Chilean main computer dealers, one of engineering education, and two service companies. In each company a group of three people were interviewed, one leader and two of his employees. A consistent set of data was obtained from the interviews, i.e. no major contradictions within the data was found. This was possible because all the people interviewed were from similar working contexts on one side and similar education from another.

An open questionnaire was applied to each of the twenty-one people that were interviewed. Questions were target from general aspects to describe the work context, to specific ones to identify conflictive situations. After each hearing, the answers were analyzed by the interviewing team so to make use of the just acquired information for the next interview. Additionally it was analyzed how the knowledge base was modified by this last interview. We looked for new conflictive situations, relevance of the conflict and frequency of appearance. Changes could be in the addition of new conflictive cases or inconsistencies with previous ones. This iterative process stopped when no more relevant information, for our purposes, was obtained. The ten questions that were asked are the following ones.

1. Work description.
2. Situations associated to the work.
3. Description of a typical day .
4. Activities schedule. Is there one?
5. Bothering situations of the near past.
6. Decision making process of the group.
7. What happens if somebody does not accomplish something promised ?
8. What happens when somebody comes late ?
9. What happens when you have to take more responsibilities than those defined for your job ?
10. What happens when you have to stay longer than defined in your contract?

After the open questionnaire was applied, a closed questionnaire was given to every person. We looked for the areas where incompatibilities in personality among members of a group were most conflictive. This was measured by determining the relation that exists in the way the group members see themselves and the importance they give to the presence of these aspects in the other members of their group. Thirty four questions with three options each were presented: a) If the characteristic was in himself, b) was in a member of the group and c) if he could work with somebody that had that characteristic.

#### Knowledge Base

A knowledge base of conflictive situations was built from the results obtained by applying both previously mentioned instruments. These were grouped according to the categories found in [Diaz et al 1992, Rahim 1983 and 1986]. The situations are mainly grouped by the source of the conflict: intra-person, intra-group, inter-group.

## 1. Intra-person.

### 1.1 Conformity with their work.

- 1 That somebody with less abilities than him ascends to his leader.
  - Conflicts in the decision making process.
  - Conflicts in the accomplishment, support and credibility of the decisions the new leader may take.
  - Frustration from the one that felt the ascend unjustified.
- 2 Working in a project where it is not clear if the results are going to be used.
  - Tolerate the frustration of doing a (perhaps) useless work.
  - To accept that the work of someone else is going to be used, instead the one done by itself, provoking rivalry.
  - Work in someone else task, leaving their own project, provoking rivalry.
- 3 Additionally to their own work, complementary work has to be performed.
  - Overhead is created by a different activity assigned by someone else.
  - Friction with the one who assigned the complementary work or with the one that is being helped.

### 1.2 Concordance between the interests of the employees and the ones of the company.

- 1 The head always thinks the company is first.
  - Friction between team members; different priorities : family - company.
- 2 Salary goal dependent.
- 3 More responsibilities taken than those necessary.
- 4 Goals are first.

## 2. Intra-group.

### 2.1 Relation with the head of the group.

- 1 Periodical reports to the superiors.
- 2 Work interruption due to new assignments.
- 3 Work that has to be accomplished that nobody cares about.
- 4 More personal relations, public relations, with the superiors so to ascend.
- 5 A despotic superior.
- 6 An incompetent boss.

### 2.2 Group harmony.

- 1 Accomplishment of group rules.
  - Reading periodically the electronic mail.
  - Secretary sharing.
  - Rigid or flexible time schedules.
  - Punctuality.
  - Accomplishment of promised goals.
  - Tolerating public objections of the performed work.
  - To know to whom to go when trouble appears.
- 2 Assuming different responsibilities than the rest of the group.
- 3 Pressing the rest of the group so to meet the goals.
- 4 Adapting to different work rhythms.

### 2.3 Task distribution.

- 1 To perform the work of someone that did not accomplish it.
- 2 To work on a project that someone else finishes.
- 3 To support the work of somebody else.

4 The own work has to be delayed because the head gave an additional assignment. 88

#### 2.4 Union of the group.

- 1 Little or no sincerity in the group.
- 2 To compete for a project.
- 3 To perform activities beyond the office, e.g., sports.
- 4 Group decision making.
- 5 Support within team members.

#### 2.5 Meetings.

- 1 Not coming to a meeting with or without a clear reason.
- 2 Flexible schedules for meetings.
- 3 No goal accomplishment in the meetings.
- 4 No finishing time in the meetings.
- 5 No clear agenda for the meeting.
- 6 Open meetings where anybody can assist.
- 7 Leaving a meeting abruptly giving no explanations afterwards.
- 8 Lunch Meetings.

#### 2.6 Organization and flexibility.

- 1 Adapting to the organization of the group: workflow, paper, informal, etc.

#### 3. Inter-group.

##### 3.1 Rivality between groups.

- 1 Struggle within groups for their relative importance within the company.
- 2 Vague or ambiguous definitions of the role of the different groups, who are client and who are servers of the different activities.
- 3 Groups may have different rules within the company, provoking conflicts when they interact.

##### 3.2 Creation of problems within groups.

- 1 Assignment of an impossible task from one group to the other, due to external constraints unknown from either side.
- 2 Unfulfilment of a promised task from one group to the other with or without a previous notice.

#### 4 Personal Characteristics.

##### 4.1 Doubtful personality.

- 1 No personal point of view.
- 2 No commitment.
- 3 Head of the group not a leader.

##### 4.2 Competitive personality.

1. Making use of other members of the group for personal achievements.
- 2 Always selecting the best for himself forgetting that he is only one gear of the group.
- 3 Head of the group making the achievements of the group, his own.
- 4 Taking advantage of other's work.
- 5 The goal justifies the means.

##### 4.3 Obsessive Personality.

- 1 Going so much in detail that the goal is lost.

##### 4.4 Different academic background.

- 1 Opinion of people of higher degree prevail.
- 2 Inclusion as a member of the group, not as the leader, of someone with a higher degree of education than the leader.

##### 4.5 Different social background.

Current Status of the project.

The previously described knowledge base is being used to implement a set of scripts. Each script represents a different situation were the user has to perform a set of different tasks. Through the election of different alternatives a decision tree is built which determines the users behavior. The comparison between the pattern that forms the decision tree of the group and the one of the applicant determines their affinity and the possible conflicts that can arise. In a next step it is foreseen to build an expert system to make this analysis.

References

1. Diaz, R., Gretti, C., Arteaga, P. & Gajardo, C. (1992). Adaptacion del inventario de conflicto organizacional de Rahim (Roci I y II) para ejecutivos del gran Santiago. Tesis de Memoria, Universidad Diego Portales, Santiago Chile.
2. Keller, R. T. (1986). Predictors of the performance of project groups in R&D organizations. *Academy of Management Journal*, 29, 715-726.
3. Rahim, A. (1983). *Rahim organizational conflict inventoried, professional manual*. USA Consulting Psychologists Press.
4. Rahim, A. (1986). *Managing conflict in organizations*. New York, Praeger.
5. Wolfe, J., & Box, T. M. (1988). Team cohesion effects on business game performance. *Simulation and Games*, 19, 82-98.
6. Yantis, B., & Nixon, J. E. (1982). Interpersonal compatibility. *Simulation and Games*, 13, 337-349.