Who is a Person of High Intellectual Reputation in an Organization?

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Abstract. In the creation/inheritance of organizational intellect, it is important to facilitate better communication between organizational members as well as to grasp and manage the organizational intellect. "Intellectual reputation (IR)" introduced in this paper is reputation for the formative process of organizational intellect. We consider a general mechanism to find and introduce a person expected to contribute to a context by generating IR from past performance record of each member. In this paper, we examine the role of IR and the mechanism to generate it.

1. Introduction

As Wenger pointed out, each member's contribution to a community depends on their own types of participation and roles; also, members move in and out of categories over the life of the community[1]. Actually, we collaboratively act in a community with mutual understanding of others' roles in the context of the activity.

If we need communication with others in an organizational activity, we will search for a person expected to contribute to the context through our own memory or records of others' past activities. One promising clue for the search is commonly called reputation. In this study, it is considered that a person's reputation consists of abstract information such as an individual's roles played in various contexts and concrete information such as that individual's performance and results. "Intellectual reputation (IR)" introduced in this paper is reputation for the formative process of organizational intellect.

Kfarm, which we have been developing, is an environment to facilitate collaborative creation of intellect through vehicles[2]. A vehicle, e.g. document, figure, and so on, represents intellect and mediates it among people. This was denoted as "Inscription" by Latour[3]. *Kfarm* provides awareness information of intellects by the mechanism to generate IR. In this study, we examine the role of IR and the mechanism to generate it.

2. Intellectual Reputation

As Hood pointed out[4], we mutually realize others' roles in a community from activities they have engaged in. This study introduces "Intellectual Role", which is a conceptualization of actors who carry out significant activities in the formative process of organizational intellect. When we search for a person who can contribute to a certain context in the process, we need to identify intellectual roles required at the context and find a person who can fill the intellectual role. Consider the case of finding a candidate to review a personal intellect as organizational

intellect. Assuming that a person who has successfully done an activity is a candidate who can properly do a related or similar activity, a person who has played a 'reviewer' of similar intellect is certainly a candidate. Furthermore, we can say that a person who has proposed novel intellect in a similar context is one who can appreciate the novelty of other intellects. The idea of IR is to provide supportive clue to identify a person who can play a suitable role to the current context.

3. Generation of Intellectual Reputation

An individual's IR comprises more than a mere record of a person's past activities. The significance of a personal activity is not always clear immediately after the activity has finished. If the activity is a part of a collaborative activity, it is particularly desirable that its significance is clarified based on the role of the person in the collaborative activity and the contribution of that performance to the organization. Putting up good performances for the organization engenders a good personal reputation. A personal reputation is only realized when the person's activity is interpreted according to the formative process of organizational intellect; its significance is then established in the organization.

The Intellectual Genealogy Graph (IGG) generator makes an interpretation by reconstructing the formative process of organizational intellect as IGG from observed activities[5]. An IGG represents chronological correlation among persons, activities, and intellect in an organization as an interpretation of observed activities of organization members. If the IR generator is given a query about IR, it searches IGGs for a person of high IR in the view of each member's roles for the organizational intellect and significance of the performance. The query represents a situation in the ideal formative process of organizational intellect. Resultant IR of that search consists of the following two types of information:

- *Performance record* comprises the past observed activities as clue that one can contribute to the situation represented by the query.
- *Interpretation* represents the significance of one's past activities.

Figure 1 shows an IR of person `P`. `P` have reputations for intellect `I`. In this case, it is assumed that `I` is close to the required intellect by the query. Also, `P` does not have experience in reviewing others' intellect, but has experience to play the important roles of `originator`, who proposed the original idea of intellect `I`, and `externalizer`, who externalized the intellect `I`, in the formative process of intellect `I`. The descendant of `I` is also a systemic intellect, which has been authorized as a significant one by the organization (`Result: grow_systemic_intellect(I)`). We can expect that `P` has expertise for the required activity because `P` is expected to appreciate the originality of the idea because that individual has practical experience in creating a similar idea through their own effort.

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Intellectual Reputation of person(P)for intellect(I)-------
  Vehicle: vehicle(V)
       File: "An_ontology-aware_authoring_tool.doc"
       Index: "ontology", "authoring tool"
  Vehicle-level activity: va_represent(P, V), va_sort(P, V)
  Intellect: intellect(I)
  Intellect-level activity: pa_construct(P, I), oa_create(P,
    I), oa_externalize(P, I)
  Role: originator(I, P), externalizer(I, P)
  Result: grow_systemic_intellect(I)
```

Figure 1. Examples of IR

As shown in Figure 1, to support finding the person who meets the requirement for the context, IR shows abstract information of `Intellect`, `Role` and `Result` as *Interpretation*, which are interpreted and recorded as IGG in organizational intellect memory, in addition to specific information of `vehicle-level activity` and `vehicle` as *Performance record*.

In general, users browse the IR information shown in Figure 1 with GUIs provided by a user environment. Our study continues to develop a user environment, *Kfarm*, as a client of the IR generator. It provides users with an easy-to-use GUI to browse IR. Most entities which constitute IR, e.g., persons, intellects, vehicles, and IGGs, are represented as icons in the GUI. A user can view contents of a vehicle by double-clicking the vehicle icon when wanting to review the intellect represented in the vehicle.

4. Concluding remarks

During creation/inheritance of organizational intellect, it is important to facilitate a better relationship between organizational members who have substantial intellect and to grasp and manage the organizational intellect. This paper proposes two models, that is, IGG and IR, to find and introduce a person meeting the context of an activity: IGG is a model to record the formative process of organizational intellect; IR is a model of a person suiting the requirement for the context. The two models are based on "Dual loop model (DLM)", which we built as an ideal model of the creation/inheritance process of organizational intellect. DLM is a result of engineering reconstruction of the SECI model[6] from the point of view of knowledge engineering and educational engineering. Further details of the DLM are shown in [2].

References

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