

# ***NEW HORIZONS AND POSITIONS: STRUCTURAL EFFECTS OF STRATEGIC NETWORKS***

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## Abstract

Extended control of resources obtained through relationships is often considered a competitive advantage. Strategic networks may support their members by providing them with opportunities to identify, establish, and develop such relationships. This paper develops the strategic network concept and analyses how membership in a strategic network affects a member firm and the structure of the network surrounding it in terms of network position and network horizon. The discussion is illustrated with findings from a case study of a small firm which participates in a strategic network in Sweden consisting of 32 small and medium-sized firms within the production industry. The findings indicate that membership in the strategic network strengthened the position of the firm and extended its network horizon.

## Introduction

Business relationships bring benefits to companies both from a social point of view and in terms of increased business. The main aspects relate to extended control of resources and increased access to information. However, strong relationships also may have drawbacks, as they are a source not only of opportunities but also of constraints. For instance, strong relationships may restrict the number of other contacts that can be handled at a specific point in time (Håkansson and Snehota, 1998; Blois, 1998). Firms are obliged to make choices concerning relationships: whether to enter into a relationship or not; and once involved in a relationship, how much to invest in it in terms of time, money and trust.

Such choices cannot be based on full awareness of the available alternatives; our capacity to handle information is too limited for that task. Each company therefore acts within a certain cognitive context of actors, some of whom are considered relevant by the company, whereas others may have been included by coincidence. However, taken together they form a space within a network horizon that is enacted, relative, and company-specific (Snehota, 1990).

A firm can choose to develop new relationships by extending its current horizon, or to strengthen its existing relations to firms already within that horizon, for instance by joining cooperative projects. Such projects may take the form of strategic networks, that is cooperative arrangements among a group of companies coordinated by some form of “hub” (Jarillo, 1988). The strategic networks have varying origins and characteristics but have in common that they are created to help their member firms to achieve goals such as increased sales and knowledge development.

Regional strategic networks, created in order to contribute to the development of a certain district by supporting some of its firms, constitute a special type of strategic networks. Fund providers, e.g., the European Union or national government agencies, often encourage the development of new relationships among firms in the form of regional strategic networks. Thousands of projects of that kind are running in Sweden right now.

The term network, the common element in business network and strategic network, may be equivocal in the sense that many reports concerning relationship development and learning in networks refer to business networks with long-lasting relations characterized by mutual

adaptations. Strategic networks, however, are of another kind. They are created by one or a few founders often for a pre-specified period, they include a specific group of firms, and at least initially the member firms often have no relations to each other. Relations developed in strategic networks often do not function as conduits for business exchange but rather as sources of information and as providers of opportunities for learning through the exchange of experience.

The life span allocated to a strategic network through the funding programme may be too limited for the development of close relationships among members. The benefits of strategic networks therefore need to be studied in their own right and on their own terms.

The addition of new relationships extends the network horizon of the firm, that is, it expands the context of relevant relationships of which the firm is aware. It also increases the number of ties that a certain firm has access to, thereby improving the opportunity of the firm to get access to valuable information (Granovetter, 1973). For firms participating in a strategic network, development of new relationships will furthermore augment the presence of structural holes in their business networks, that is, it will increase the number of non-redundant relationships with regard to information access (Burt, 1992). The typical structure of a strategic network makes it likely that new relationships acquired within the strategic network will connect them to firms with which they previously had few, if any, relationships. The new relationships thereby increase the access to resources such as knowledge and information, improve the timing of the information flows and increase the number of referrals given to the firm in the market.

The acquisition of new relationships moreover affects the network position of a firm, that is, how its identity is perceived in the network. This has important strategic implications for the firm as it sets the stage for its opportunities as well as its constraints. Gulati et al. (2000) argue that “the specific network to which a firm belongs and its relative location in that network are likely to be important” since firms with a more central position will enjoy superior returns as they will have access to better information and opportunities than more peripheral actors.

The research question of this paper concerns the effects on member firms of membership in a strategic network in terms of their network position and network horizon. Apart from the theoretical interest, increased knowledge of strategic networks has practical use for

participants as well as organizers of such networks as it improves the base for decision making for firms considering membership and for design guidance for creators of strategic networks.

In the following, the relation between business networks and strategic networks is analyzed. The concepts network position and network horizon are applied to a discussion of how strategic networks affect the network structure and the strategic possibilities of participating firms. The discussion focuses upon a case study of a firm participating in a strategic network in Sweden.

### **What is a strategic network?**

The term network is far from unambiguous. It is used in many different contexts with different meanings, within scientific disciplines as well as in more practical circumstances. This may be confusing when it is used to denote different but related concepts such as business networks and strategic networks. The major differences between the concepts are related to the genesis of the network. While business networks gradually develop out of business relations, strategic networks are created by government agencies or other actors and thus have a formal starting point. Consequently, strategic networks can be considered within an alliance perspective in line with Jarillo (1988), who defines strategic networks as “long-term, purposeful arrangements among distinct but related for-profit organizations”.

Strategic networks are often set up with financial support from regional or national governmental funds and funding from the European Union. This may result in large and heterogeneous groups with several broadly defined goals that may include members with as well as without previous business relations.

The term “strategic” in strategic networks refers both to the time dimension and to the importance and impact of the membership effects. With regard to time strategic networks are generally designed with a long-term perspective – although their formal life-span often is rather short – since membership effects often appear only in the long run. And with regard to impact the public sponsors of strategic network normally assess their intended effects as quite important as this concerns business development in the perspective of regional or national industrial policy. For the individual firms the decision whether to join the network or not, as

well as the following decisions on how much time and effort to put in to it, might not always seem as strategic ones. It depends upon how membership fits in with the strategies adhered to by firm managers as well as upon their personal attitudes towards cooperation, information sharing, and formal training. Whether or not membership actually turns out to be of strategic character cannot be assessed *ex ante* which is consistent with the notion of strategies as emergent rather than intended.

In Jarillo's (1988) definition of strategic networks, there is a "hub firm" actively organizing the network based on business relations. In the strategic networks discussed in this paper, this central position is maintained by some kind of project leader whose relations to the member firms normally does not involve business.

Strategic networks are also characterized by the distinctiveness of membership. In contrast to business networks, there is a clear set of members in a strategic network. Its borders are distinct. The project manager is supposed to initiate and coordinate network activities and encourage the members of the strategic network to act according to the goals stated; there is however no formal means to make the members comply. In contrast to strategic alliances, firms participating in a strategic network are not systematically directly connected to all the other members but only through the project leader, whereas in alliances all members are formally interconnected by contractual links.

Thus, strategic networks have varying origin and characteristics. In the present paper we deal with a strategic network created in order to contribute to the development of a certain region by supporting some of its firms and how this strategic network affects the business network of its member firms.

## Network horizon

Based on the definition by Cook and Emerson (1978), Johanson and Mattsson (1994) state that all firms are part of an all encompassing business network of direct as well as indirect relations. Thus, also all member firms of a strategic network are part of the business network. Still, a single firm can attempt to strengthen its relations to certain other firms by joining cooperative projects, for instance in the form of a strategic network. Although the firms of the created strategic network are included in the all-encompassing business network, a single firm

cannot perceive all connections at the same time. Only some of these firms are initially seen as included in each firm's relevant business context. Each company acts within a certain context of relevant connections that is enacted, relative and company-specific (Snehota, 1990). This context is delimited by its network horizon. Every member of a strategic network has its own network horizon; however, the set of relationships within their horizons (that is, the perceived context of relevant relationships) may be more or less overlapping depending on how closely related their businesses are.

Membership in a strategic network offers a firm the possibility to add new relationships as well as of deepening already established relationships, thus bringing firms into contact with hitherto unknown potentials and capabilities of other members. This implies that membership may affect both the network horizon and the structure of the set of relationships within its current horizon.

## Network position

The position of a firm in the business network is formed by the way the focal firm is regarded by the other actors. This distinguishes the perspective implied by the position concept from that of the horizon concept, as the latter emanates from the awareness of the focal firm. Both concepts represent structural conditions that are based on the set of relationships that a certain firm possesses. A change in these conditions affects the opportunities available to the firm in the market and thus also its competitive position. A firm's position in a network is the result of long-term interconnected activities by all firms in the network; it is therefore never fixed but constantly changing.

When discussing market positions, Johanson and Mattsson (1985) use the concepts internal assets and market assets. Internal assets represent assets under direct control of the firm and market assets those resources of other firms that may be accessed through the relations emanating from the market position. In this terminology, membership in a strategic network may be characterized as a market asset since it may add direct relationships as well as indirect relations to the firm's original relationship portfolio and thereby develop its network position. Becoming a member in such a network may be regarded as a strategic action influencing the position in the business network. According to Johanson and Mattsson (2002), such strategic actions are of a dual interest as they will have consequences for the firm in question but also

“have implications for the dynamics of the industrial system” (p. 183). Since all firms are connected in the business network through direct or indirect connections and since their positions are relative to each other, a change in position of one firm will affect the positions of all the other firms depending on the degree of change and the closeness of the connection.

Johanson and Mattsson (2002) use the position concept in order “to describe how individual actors in the network are related to each other in a network structure” (p. 183), thus showing how an actor is embedded in the environment. They have earlier (Johanson and Mattsson, 1985) defined the concept as encompassing four aspects, referring to a focal firm in the network: (1) the *identity* of other connected firms; (2) the *role* of the firm in the network; (3) the *importance* of the firm in the network; and (4) the *strength of interfirm relationships*.

This definition is not self-evident as position is a complex theoretical concept. The dimensions *role and importance* refer to the network-as-a-whole while *identity* and *strength of interfirm relationships* relate to the other individual actors in the network. However, there are interconnections between the network dimensions and individual dimensions as, for instance, strengthening an individual relationship will strengthen the firm’s relation to the network in an overall sense as well.

*Role* refers to the activities of the firm while contributing to the functioning of the existing network logic, while *importance* is based on the extent to which an actor can preserve or destroy network stability. It can however be argued that the dimensions *role* and *importance* overlap as importance is defined out of specific roles, whereas the roles played by the actors constitute their source of importance (Henders, 1992). Keeping this in mind, these dimensions will be used in the analysis of the effects of participation in a strategic network.

The aspects imply that a firm cannot form its position by itself; it is dependent on the positions of its partners. However, the firm still has ways of influencing the position and there are many good reasons for doing so. The network position reflects the access that the firm has to the resources of other firms and it is therefore of strategic importance. It is the result of the firm’s past employment of resources and constitutes the foundation for future strategic action as it is the basis for its opportunities, while it at the same time constrains its possibilities.



The creation of a strategic network opens up possibilities for the member firms to develop their relationships, and thereby their network positions. It offers the participating firms a certain number of presumptive partners with other identities and characteristics. The creation of new arenas for meeting and the development of common experience in the strategic network may further deepen existing relationships with other member firms. By adding or deepening relationships, the firm may change its role in the business network as it may become a more central actor. A more central position in the network will, moreover, increase its attractiveness as a partner. Such changes in position will therefore also affect the positions of actors outside the strategic network and thereby cause changes in the business network as a whole.

## Method

A strategic network with 32 member firms, which we may call the Iota Network, was chosen as the object of study. It is a strategic network that has been operational for several years. Access and mutual knowledge was already established because of earlier cooperation between the Iota Network and Mid Sweden University as business students had conducted studies in several of the member firms for their course papers. Among the member firms, firm A was chosen for analysis in the present paper as membership in the network had noticeable effects both on its network position and network horizon.

Data were collected by semi-structured interviews. Of all 32 member firms, 30 firms had been members for more than a year. In these 30 firms, interviews were held with the managing director who often also was owner or part owner of the company. The interviews were semi-structured in order to increase comparability. They were made by telephone for 4 firms; the remaining 26 interviews were made at the firm site. The discussions were relatively free. Prepared questions were mainly used as a checklist to make sure that no important theme was left out by mistake. The questionnaire did not pre-empt the open-ended nature of the interviews; within each question there still remained an opportunity for exploratory questions and unstructured answers, as recommended by McCracken (1988). The interviews lasted approximately one hour each, they were tape recorded and were fully transcribed<sup>1</sup>.

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<sup>1</sup> The interviews were held in Swedish and transcribed by the interviewer who also translated the quotations used in this report into English. In certain cases the grammar is slightly corrected, trying to keep the meaning intact.

## The case of company A in the Iota Network

The Iota Network was founded in 1999 and was still operating in 2004. Originally it was set up in order to increase sales and stimulate knowledge development in small and medium-sized firms within a sparsely populated Swedish region. The initiative came from a company manager and an employee in a local government agency working with regional industry development issues. The company manager had earlier run some cooperative projects with some firms in the region, for instance, a group of firms that used to participate jointly in a major trade fair. An invitation to join the new strategic network was sent out to all manufacturing firms in the region. About 30 firms decided to become members, among them all the firms that used to go to the trade fair together. Over the years some member firms left the Iota Network but others took their place.

In 2004 the network encompassed 32 member firms representing various manufacturing branches. It was heterogeneous in terms of firm size, technology, and cooperative experience of members and covered a large area with distances of several hundred kilometres between outlying members. It was financed by annual membership fees of 500–1000 euros depending on firm size, as well as by government funds and funding from the European Union. A project leader without business relationships to any member firm acted as the hub, initiating and coordinating the network activities. He was supported by a board of directors and three working committees with members from the participating firms. The network activities mainly consisted of participation in trade fairs, business courses and member meetings when network activities were discussed and planned.

The member firm A, with 15 employees and located in a village in a remote area and operating in the mechanical business with most of its customers and suppliers outside the area, was chosen for the study. It was mainly a sub-contractor but cooperated closely with its customers by adapting production processes and discussing product design. The company was owned by two persons and one of them represented the firm in The Iota Network; he was therefore chosen for the interview. The firm's main motives for joining the Iota Network were to get marketing assistance, for instance through joint participation in trade fairs, and to achieve knowledge development at reduced cost through participation in joint training programmes.

One of its customers, firm B, was also a member of the Iota Network and took part in the same educational programme as firm A, “World-class production”, arranged by the Iota Network. Their relationship was established already before the formation of the Iota Network but through their common membership in the group and in the education programme the interviewed manager expressed that the relationship had been improved and strengthened:

We used to go all by ourselves but now we have an exchange of experience. We are beginning to speak the same language.

These firms were located close to each other. Still it was only after they took part in this course that the employees started to visit each other and discuss common tasks:

Now, it sometimes happens that our engineer goes over there to discuss the job he is doing for them, which did not happen before.

Furthermore, firm A was able to establish a new business relation with firm C, a member in the network that it was not related to earlier. Firm A knew the company before but regarded the development into a business relationship as a consequence of their common membership in the Iota Network:

It has a lot to do with the Iota Network: you meet and talk and tell each other about what you are doing.

As an effect of the activities of the Iota Network the owner of firm A became aware of all the other firms in the strategic network, e.g., firm D. He had not heard of firm D before getting in touch with it through the Iota Network. He found the occasions for informal talk in the group with this firm and others very valuable and gave as an example a trade fair previously arranged by the Iota Network:

It was a failure as a trade fair but great as an occasion for small talk among the member firms. It was very interesting to talk to the others.

He would like to see even more opportunities for informal talk since he found it informative and helpful for running the business:

You learn from how they did it. You can discuss banking terms or suppliers and that is very valuable. You can make a lot of money on that as well, even if it's not business.

He felt that the information he received during these talks had affected his way of acting. The talks also had a personal effect:

On a personal level it has been a relief to see that you are not the only one facing all these kinds of problems.

The manager of Firm A moreover believed that the concept of the Iota Network as such improved his marketing arguments:

The Iota Network is well known in wide circles so if you tell that you are a member of it you get the reaction "well that is interesting, that is good" because they know that if they approach one of us with an inquiry they get the Iota Network as a whole. OK, firm A will accept the job but they will divide it within the group and let other firms do what they cannot handle themselves [...] and if we do not survive some other firm within the Iota Network will take our place.

This kind of cooperation between firm A and some other firms in the community where firm A is situated involved both members of the Iota Network and other local firms.

The manager of Firm A chose not to take part in the board of directors or any working committee within the Iota Network as the business relations external to the group were a restriction on how much time he can allocate to the strategic network:

We've been busy developing our own business.

## Membership effects

### Types of membership effects

All members of a strategic network are involved in their own business network of relationships. These relationships may be arranged into different sets of portfolios, like customer portfolio, supplier portfolio and indirect portfolio (Zolkiewski and Turnbull, 2002). The strategic aspect of handling these portfolios involve the evaluation of each relationship, its costs and benefits, followed by an analysis of how the portfolio may be improved. Improvements may take the form of ending, modifying or adding relations to other actors.

Joining a strategic network will create possibilities for the two latter alternatives. This provides possibilities that may be of a different kind than the ones that otherwise would have arisen, as the firms will have opportunities to interact in arenas provided by the arrangements of the strategic network. Furthermore, the firms will be involved in activities for reasons developed in the strategic network and under the influence of the goals of the network. Participants in a strategic network are for instance likely to meet in various committees working for a common goal, in training sessions, and at study visits to other member firms.

Informational benefits of indirect ties are reported by Gulati (1995) who concludes that such ties have a referral as well as a control function which increases the probability of future cooperation by raising the level of trust associated with the presumptive partner. Previous direct ties increase the possibility that a relation will be re-established (Larson, 1992). This path dependence is explained by increased access to information about previous partners, in terms of resources, reliability etc.

It has been shown that previous personal relationships will facilitate the forming of business relationships as they lay a foundation of mutual trust and reduce the perceived risk (Larson, 1992). Personal reputation, as well as firm reputation, established in reports from direct and indirect contacts, thus influences the probability of choosing a certain partner. The reputation of partner firms is important when considering risk, but will moreover influence the firm's own position in the network since cooperation with a high-status partner may increase the firm's status in terms of credibility and legitimacy (ibid.) The identity of a firm, derived from its network position, affects its attractiveness as a partner and by adding or developing relationships through membership in a strategic network, the reputation and identity of a firm may be improved and facilitate future relationship development with firms inside or outside the strategic network.

A relationship established in a strategic network like the Iota Network may thus pay off even long after the dissolution of the strategic network, and even if the relationship comes to a halt when the strategic network is dissolved. It will however limit the available time and resources for developing relationships to firms external to the strategic network.

### Effects upon relationships established before joining the strategic network

Due to the activities within the Iota Network the relations between other network members and firm A were strengthened as a common language developed that facilitated communication and cooperation. This view of the relationship as clearly improved was furthermore confirmed in the interview with the Iota Network representative from firm B. After the course that they both took part in he stated:

The questions we ask are not as unexpected as they would have been; they have developed the same thoughts.

Another indication of a stronger relationship is that personal interaction developed between the firm employees who visited each other in order to find co-developed solutions when problems arose. No relationships were reported to have been negatively affected by the membership; however, some conflicts did arise, for instance concerning priorities among network activities. In such cases, participation in a strategic network may harm relationships. It is furthermore likely to harm established relationships with firms external to the strategic network; as the firm manager's time is limited, the amount dedicated to strategic network activities will reduce the time available for handling external relationships.

### The development of new relations

In addition to strengthening already established relationships, new relations of various strengths were developed with other network members. These relations were highly valued as sources of information by the member firms, which is in line with the statement by Burt (1992) who argues that "a large, diverse network is the best guarantee of having a contact present where useful information is aired". In the Iota Network, certain situations were referred to as particularly favourable for the development of personal relations between members, for instance a trade fair that was arranged twice by the project leader during the first years of the Iota Network. The fair was a failure in terms of creating immediate new business but successful in creating opportunities for small talk and relation development among the member firms.

Joint courses and seminars as well as study visits to member firms provided other occasions and arenas for the development of informal relations. Several informants asked for more opportunities to have informal discussions since they judged relations to be of utmost

importance for the development of their business in terms of learning as well as business opportunities. The opportunity to interact on a regular basis and in different arenas with firms outside the regular network context was regarded as an important benefit by most member firms. The majority of the representatives in the Iota Network ranked the experience of such interaction as the primary benefit of their membership in the network.

### Position and horizon evolution in the Iota Network

Before the foundation of the Iota Network firm A had rather few business contacts. The firms that firm A was aware of, i.e., the firms within its network horizon, are represented by the dots within the broken oval circle (the horizon) in figure 1. However, the number of dots does not indicate the absolute number of firms within its horizon. Still, as indicated in figure 1, only a small number of firms were seen and handled by the focal firm. Of the firms within the horizon, some constituted strong relationships to firm A (indicated by a continuous line), others were weak relationships (a dotted line), and some other firms were known although there was no relationship between them and firm A.

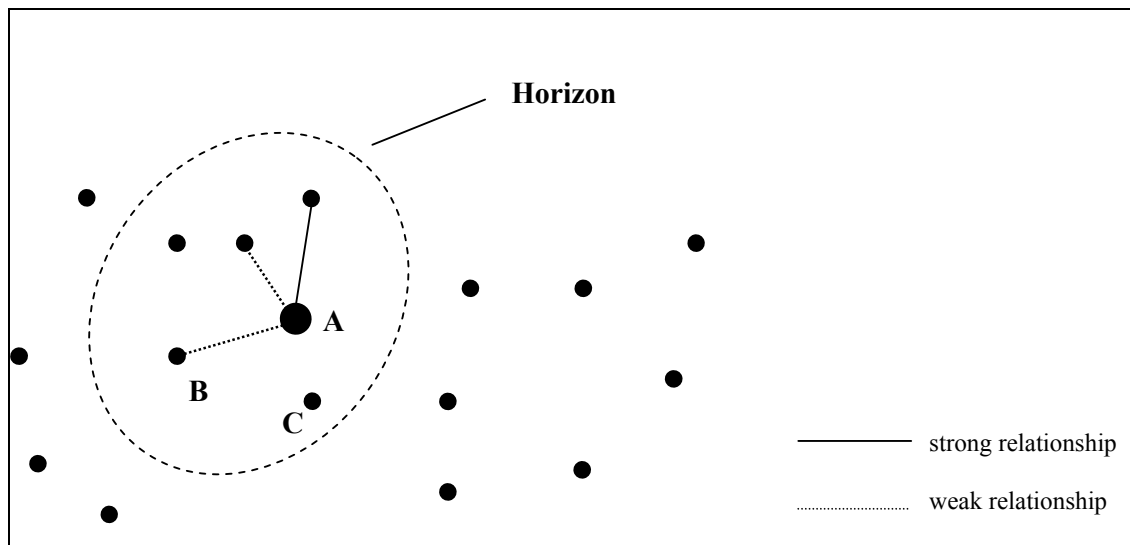


Figure 1. *Network position and horizon of firm A before joining the Iota Network*

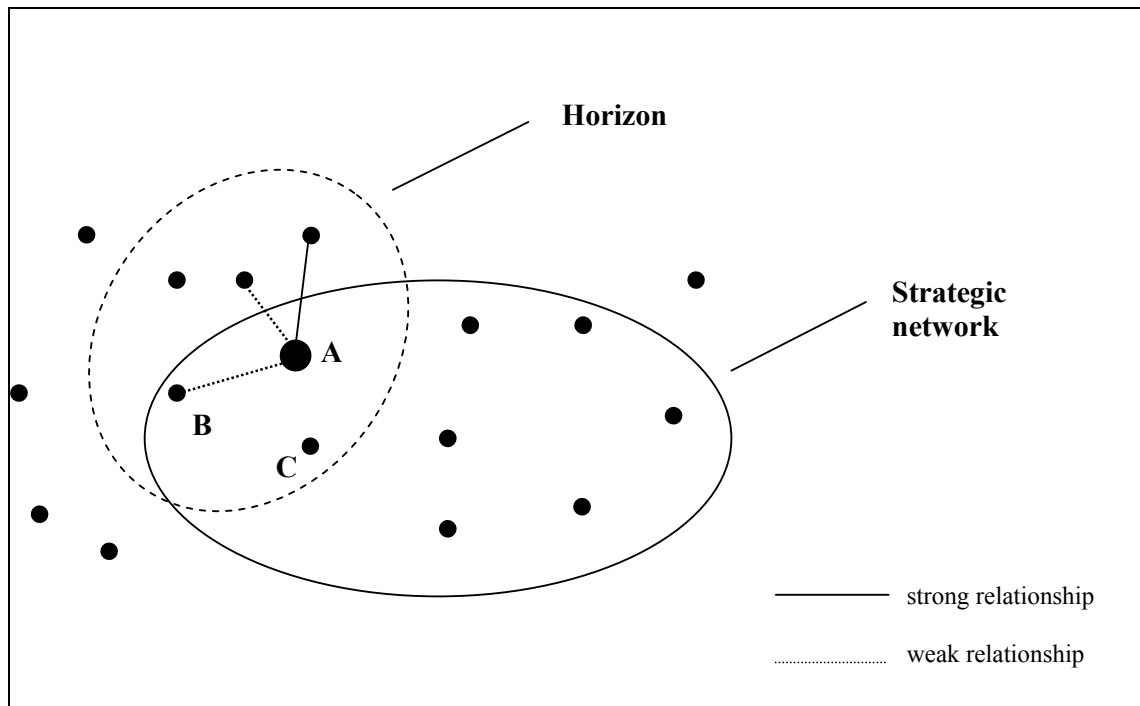


Figure 2. *Network position and horizon of firm A when becoming a member of the Iota Network*

Figure 2 represents the situation after firm A joined the Iota Network (indicated by the full oval line) including firm A as well as some of the firms already within its network horizon but also several firms that firm A did not know earlier. However, at this stage firm A's membership in the strategic network had not affected the location of its network horizon.



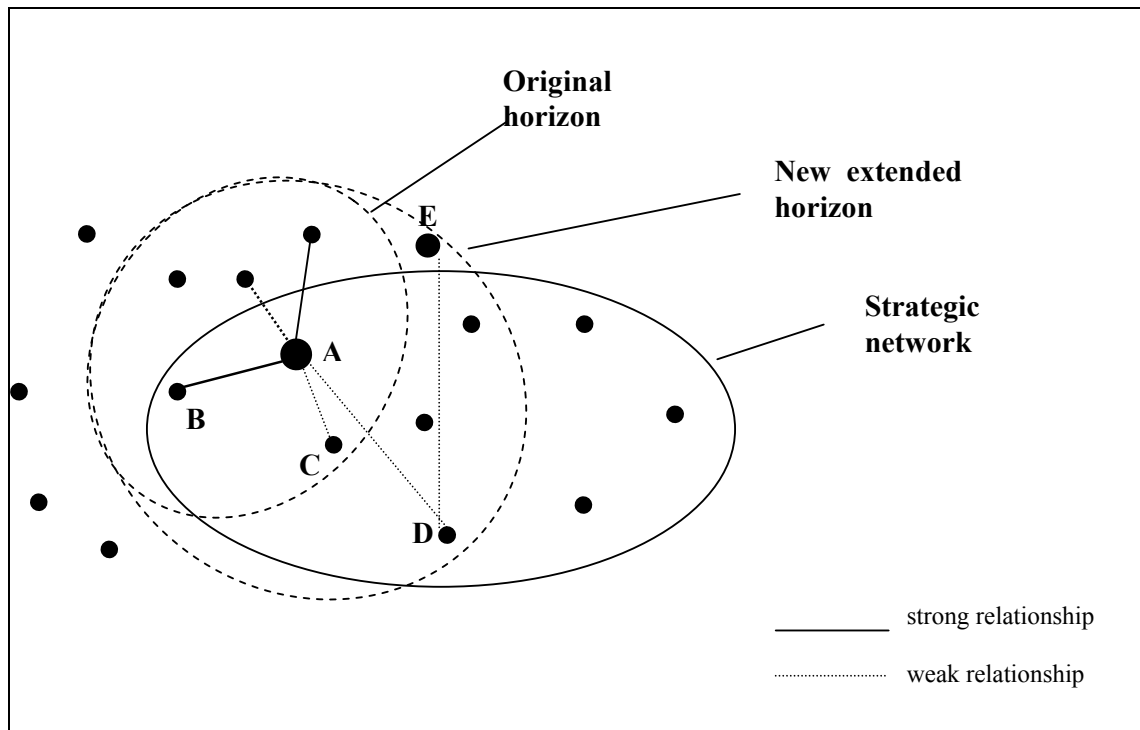


Figure 2. *Network position and horizon of firm after 3 years' membership in the Iota Network*

In figure 3, at the point of investigation, the Iota Network had been operating for three years and the focal firm A had taken part in several network activities. As a result, there were changes within its network horizon. A relationship was established to firm C, a firm that was within the horizon already before the creation of the network but to which firm A had no relation to at that point in time. Furthermore, the relationship to firm B had been strengthened due to activities within the network.

Moreover, the location of the network horizon had been affected; it expanded as personal relations – albeit weak – were established with other members of the strategic network (e.g., with firm D). These relations created indirect contacts to firms outside the strategic network as well (exemplified by firm E).

### Effects on the network horizon

Three main categories of connections among the member firms can be defined at the stage when a strategic network is created: (1) member firms without earlier contact with each other, (2) existing contacts between member companies but without current business exchange, and (3) ongoing business relationships with other members of the strategic network.

For firms belonging to the first category, i.e., firms without earlier contact with each other, the creation of the network offers a potential for the development of new relationships, which may lead to valuable exchange of information, increase referral opportunities, constitute possibilities of resource extension, and new business opportunities. There is, however, a certain inertia in business relationships that counteracts the replacement of business partners, since relationships demand investments in the form of time and money to develop (Håkansson and Snehota, 1994). Such investments may be lost if the relationship is ended. Eriksson and Hohenthal (2001) argue that it is easier to change partners in business relationships characterized by explicit technology than in situations with exchange based on tacit knowledge, since requests can be articulated and communicated to a new partner when the technology is explicit. However, relations may be added without breaking up previous relations since new business deals may arise as consequences of new business opportunities or from a decision to outsource. ” Instead of producing oneself, one may be able to teach others how to produce and persuade them to do so” (Langlois and Robertson, 1995).

In the second setting a contact already exists between member companies. Such a contact may be based on personal relationships with or without earlier business relations. In these cases, there is a potential for deepening the relationships as mutual knowledge might grow because of increased interaction.

Firms with ongoing business relationships with other members constitute the third category, for which the potential of the strategic network mainly lies in deepening existing relationships. There is thus a gamut of interconnections, ranging from total lack of knowledge of the other party’s existence to close business cooperation with strong personal relations.

In the Iota Network, the firms varied in size from 5 to 150 employees, with small firms working within narrow network horizons and the larger firms, by their sheer number of contacts, within wider networks horizons. The wish to increase the network horizon by coming into contact with new suppliers, customers or other actors of importance was, however, expressed irrespective of firm size.

The extended horizon increased the opportunities available to firm A as the resources accessible to the firm through cooperation with other firms increased markedly. Furthermore, the number of weak ties to member firms increased. Such ties imply access to valuable information (Granovetter, 1973) and often constitute structural holes, thereby improving information availability, the timing of information, and the amount of referrals in the market (Burt, 1992). The new relations were highly valued by the informant of firm A who reported:

For me personally it has been a relief to see that I am not the only one facing these various kinds of problems.

In times of stress and constant pressure from competitors membership in a strategic network may thus fulfil an important social purpose by providing managers with opportunities to meet and talk with others in similar situations.

### Effects upon network position

From the case study it is evident that the network position of firm A has undergone important changes due to its participation in the Iota Network. We analyse these changes using the definition of network position by Johanson and Mattson (1985), i.e, identity, role, importance, and relationship strength.

The first dimension, the *identity* of the other firms with which the firm has direct or indirect relationships, changed as firm A got new relationships with firm C and D as well as other member firms. These new relationships also provided firm A with indirect contacts to firms related to the new relationships, e.g., firm E through its relation to firm D. The successful and growing firm C became an important customer; this new relationship obtained through the Iota Network therefore markedly increased sales for firm A.

The turnover of firm A increased as an outcome of the connections that were established to firm C and other member firms of the Iota Network. In terms of Johanson's and Mattson's second and third dimensions, *role* and *importance*, it can therefore be argued that the role of firm A in the network became more central and important.

Finally, the fourth dimension of the network position, the *strength of relationships* was affected since the relation to firm B grew stronger due to common experience from the activities within the Iota Network.

As relationships were strengthened and as the position of firm A got more central due to several new relationships, we can conclude that the market assets of firm A increased. This strengthened the position of firm A in the business network and improved its strategic position in the market. Still, although firm A did not experience any negative effects on any relationships, some counterparts may have reacted to the fact that the manager used part of his time for handling relationships belonging to the strategic network. There might thus have been an unnoticed negative effect offsetting some of the positive development achieved through participation in the strategic network.

## Discussion

Time is required for the development of interfirm cooperation and business deals, in particular for firms with only little prior knowledge of each other. Interaction often has to go on for long so that mutual knowledge of each party's competence and resources may grow along with the development of trust. It is therefore problematic for strategic networks that available funds usually are limited to three or four years. The importance of personal interaction for the development of trust and relationships may, furthermore, not always be fully known to the managers of these networks. Therefore, the network activities do not always provide enough occasions for the development of personal relations. Weak ties among members should at least be achievable even in the short run in strategic networks.

It seems hard to make cooperation in strategic networks permanent. When external funding is terminated, the strategic network often is dissolved at least in terms of the original design. However, the relationships that were created between members sometimes turn out to be vigorous and continue to be operational also without support from the strategic network. In other cases the strategic network may be redefined and recreated in new forms, either as a new strategic network or some other kind of formal or informal group. It has been shown by for instance Draulans et al. (2003) that networking experiences are important for the formation and success of interfirm cooperation. Their study indicates that the ability to succeed in interfirm cooperation increases with experience. It is therefore not unexpected that

those with positive experience of cooperative arrangements like strategic networks regroup and find new forms of cooperation and financing over time.

Most members of the Iota Network believed that the network would cease in its current form at the end of the funding period. This might mean an unfortunate interruption of promising relationships but the member firms with positive experiences from the strategic might go on cooperating between themselves. Judging from the history of the participants in the Iota Network, there is a clear tendency that those in favour of cooperative arrangements of this kind regroup and find new forms of cooperation and financing. For several of the participating firms, however, this experience of cooperation outside business relations was a novelty. They used to take pride in handling problems and knowledge development on their own, an attitude, stressing independence and lack of trust in other firms, which may have been augmented by their lack of cooperative experiences. Membership in a strategic network may for such firms be the beginning of a new view on strategic benefits of cooperative actions.

Through economies of scale or by funds received from the European Union or local government, strategic networks may be able to offer participation in trade fairs and education programmes at reduced price. This can increase the attractiveness of attending such activities. The members will thus be able to pursue business goals, like cost-effective training and knowledge development, and at the same time develop personal relations to other members. Such mixtures of benefits may be necessary to create a sufficient level of interest for active participation in these kinds of strategic networks as there always is an alternative cost to participation.

The work of the project administrators, marketing the network offerings to the member firms, is furthermore of utmost importance as it provides the member firms with extra driving force. Their efforts to reach the goals of the strategic network project may make the member firms try activities that they would not have thought of otherwise and which they, in several cases, would not have been able to finance by themselves. The project leader's and other network administrators' roles as driving forces are thus very important for the achievement of interaction and knowledge development in the strategic networks as the activity level largely is a reaction to their initiatives.

The feasible gains, in the short run, are mainly made up of adding new, mostly weak, relations and in deepening the relationships among member firms that already existed before the

formation of the strategic network. This may however still have profound effects on the network position and network horizon of a specific member firm.

## Conclusions

Membership in a strategic network brings unique possibilities to each participant since every strategic network has its specific composition and goals and each firm its unique starting points in its connections to firms inside and outside the strategic network. In general, however, a strategic network offers new arenas for interaction, which may lead to relationship development and deepening of already existing relationships.

A strategic network, driven by some kind of project administrator, strives to increase the mutual visibility among its members. Relations to other member firms that already existed before a firm becomes a member may be affected positively or negatively by actions carried out as a consequence of activities in the strategic network. By advancing the development of new relationships, a regional strategic network may, furthermore, extend the network horizons of the participating firms by increased awareness of actors inside the strategic network as well as outside through indirect contacts.

Development of new relationships among the members furthermore increases the overlap of perceived network contexts as the firms get more similar sets of relationships, thereby creating world views that are more congruent and shared experiences that create common frames of references. In both cases, further interaction among the parties is facilitated. Taken together, pre-existing relations and new relations to other members in the network affect the firm's network position as well as its network horizon, thus influencing the strategic opportunities.

If firm relationships are strengthened or developed, this increases the possibilities for improved access to information, for improved timing of information and for an increase in the number of referrals in the market. Participation in a strategic network may finally increase the firm's knowledge of how to handle relationships and its knowledge of the gains that can be achieved through cooperation in strategic networks. Such knowledge may be useful in other settings as well and result in increased openness for cooperation in the future. Thus, the

conditions are improved for firms actively participating in a strategic network even if it eventually is dissolved.

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