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Networking in Software Outsourcing

An analysis of the advantages and disadvantages of close relationships between Gislen Software and its clients

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Abstract

This paper describes how Gislen Software (GS), as an offshore software developer, builds strong networks with its clients. The paper will discuss the problems as well as the advantages of the strong bonds between the various parties. To do so I have used a model for business networks suggested by Axelsson (1996) and I will identify the different parties and their relationships to one another.

I found that customers often become very possessive towards individual developers working for Gislen Software and that this bond at times becomes unhealthy as it hinders the employees in learning more about other technologies besides those the client actually work with. I have also mentioned a few of the advantages of these strong bonds between the parties in a business network, as well as when they are healthy for all involved parties.

Finally I have given some suggestions as to how these problems can be avoided in the future.

Contents

Introduction

Gislen Software Pvt. Ltd. is a Software Export Company located in Chennai, South India. The Company offers outsourcing (offshore consulting and development) for clients from all over the world. Unlike most companies it does not deal in the local markets, which presents both problems and opportunities. The author of this paper, a Swedish national, started the company in 1993/94.

Purpose

This paper analyses certain aspects of Gislen Software's marketing approach as a knowledge company. Often there are very strong bonds between GS staff members and their clients. Individuals learn a lot of information about their clients over time and the clients are hesitant to let go of the individual. At the same time, the staff or resources want to develop their knowledge in other technology areas and often feel trapped working with only one client over a long period of time. At times this has even led to employees resigning to seek new opportunities and this has been harmful to both the client and Gislen Software. There have been instances where a certain client has earned a reputation within the company of trapping the staff who work with them, resulting in no one wanting to work with this client in the future. This can seem to be an internal resource problem, but in fact it becomes a marketing problem since it strongly affects the interaction between Gislen and its clients.

At the same time, these strong bonds also result in long-term relationships between the decision-makers and individuals, which is good for the growth of the company. What is healthy and what is not? To fully understand this we will have to study the company, its structure and its production process.

Limitations

Being the managing director and founder of the Company will make it difficult for me on one hand to analyse the organisation in a completely unbiased way. On the other hand,

my position and complete knowledge of the company's history, gives me a lot of insight into the issues. At the same time I have tried to be objective in my analysis. A few other people have checked this paper and their feedback has been taken into account before submitting the paper.

The networking model used is only partially helpful to describe and understand the complex relationships between the company and its clients.

Method

I have used the network model described by Axelsson (1996) to analyse the interface between Gislen Software and it's customers. I have also extended the model so that it can be used to analyse what actors are influential for decisions affecting the problem of relationships between staff and the clients described in the section above. To get some facts about the motivating factors, which play a part in the problems, all employees have been asked what they believe to be the main motivating factors that influence their view of work with the company. When it comes to clients, the negotiations and problems, which have come up over the last few years are adequate for assessing the client's ties. However it is not possible to make any statistical conclusion where clients are concerned.

Outline

I will initially describe and discuss the theoretical framework and the model used to understand the problems. Then I will describe the company - it's marketing and production process as well as its organisational structure.

Finally I will conclude and recommend what can be done to solve the problems.

Theoretical background

The Network model

Axelsson, 1996 describes a model for understanding how companies act in networks. The three essential objects to study are Actors, Activities and Resources. Actors control resources and perform activities, Activities link resources to each other as seen in the chart below. However for Service companies like Gislen Software this model is not complete. According to Axelsson there is a need to augment the model for companies in a service industry such as software development. These additional factors are process, personnel and physical environment[i].

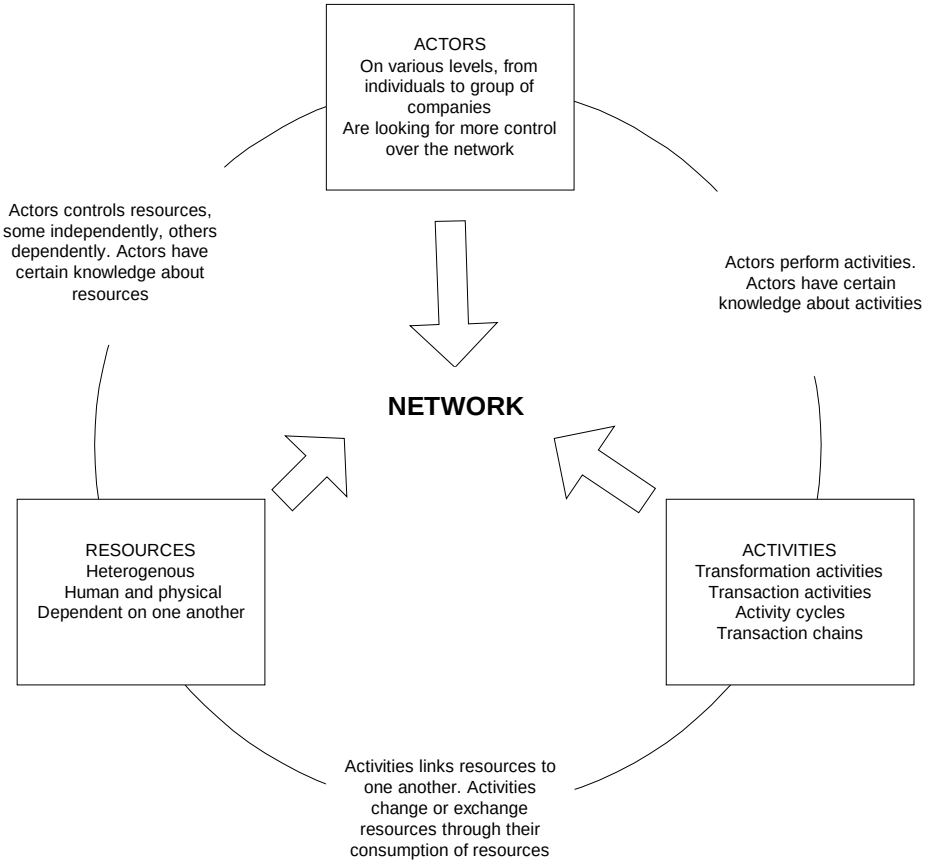

Fig 2. The general Network model for how companies interact in a business to business market. (Axelsson, 1996, page 215)

Axelsson describes the various relationships between the objects in the model. Links between activities are called ***Activity-links***, which we, from a Knowledge Company's side, may want to describe as a Process. Relationships between Actors are called ***Actor-bonds*** and finally relations between resources are called ***Resource-ties***. The relationships between the Actors, Resources and Activities on the customer and vendor side are very complex in a knowledge company and the model will only partially help in understanding these factors. But it will give enough of framework to start the discussion and come up with some suggestions for change.

How can we apply the model to Gislen Software?

To apply this model we first need to study the company. Next I will apply the model by defining Actors, Resources, Activities and the relationships between these. I will also present my assessment of this model and suggest some recommendations for change so that close relationships do not become unhealthy for either the company or the clients.

Presentation of the company

Gislen Software is a Private Limited Company located in a 100% Export Oriented Zone outside Chennai (formerly Madras) in South India. It was founded in 1994 after about 1.5 years of preparation and learning about the bureaucracy of the Indian official environment (The first 6 months from Sweden and the rest in India). The promoter (the author) and 2 Indian programmers were the first employees.

The first year was mostly used for training the staff, but a few minor projects were also undertaken. Though there was from the beginning a clear vision to be a high tech consulting company offering quality services to international clients, the complete business idea developed slowly over the first few years. The company grew quite fast and more and more clients and employees were added. There were some quality problems over the first years and the company lost a few clients because of this, but the larger accounts stayed with Gislen Software and helped it to develop its knowledge and

competencies. In the last accounting year, having had an average sales growth rate of close to 100%, the company had a sale of Rs. 12 million (SEK 2.4 million). Taking into account that cost levels are approximately one fifth of those in Sweden, comparable sales would be SEK 12 million[ii]. Today the company employs 34 staff of which 27 are in production, 4 in management and the balance working with administration.

Market

Gislen Software is a knowledge company. It sells services but also, in most cases, develops and delivers software solutions based on the customer's requirements. The customers are either software consultants themselves or companies, which produce software products. The software solutions are normally sent to the clients via the Internet. Gislen focuses on small and average sized projects, or parts of projects for mostly software organisations. This makes the company quite unique since most Indian competitors rather focus on end users and full-sized, full-lifecycle projects. The company has only, in one known case, lost an order to a local competitor. Unlike most competitors Gislen has 2 foreigners on staff (the Managing Director – the author who is Swedish and the Business Development Manager who is a British citizen) in the management team. The company therefore is in a unique position when it comes to selling to European companies, where most Indian software companies are weak since they mostly focus on the US market. Almost all communication with the clients is done through the Internet, which means that Gislen normally does not choose to work with companies who do not have the needed infrastructure or the system of answering emails quickly. The technological focus is on Object-oriented Software, Software Component technology, Internet related projects such as eCommerce projects and web-design.

The Organisational structure

Since there are no local customers, local interaction is limited to interaction with official institutions and vendors. There is a considerable amount of work related to recruitment and training of software personnel. Only the Managing Director and the Business Development Manager are directly involved in sales. It does happen that the company

sends technical staff overseas when required, but most of the staff only see the customers face to face if the customers visit Gislen Software's office.

There is a management team, consisting of the Managing Director, an Executive Director (Deputy Managing Director), a Business Development Manager and a Human Resource Executive. To assist the management team there are two Administrators and a Systems Engineer. The technical staff has various formal designations (unlike in Sweden, where people place much less importance on the formal designation), though in practice there are only three functional designations: Project Leaders, Analysts and Software Engineers.

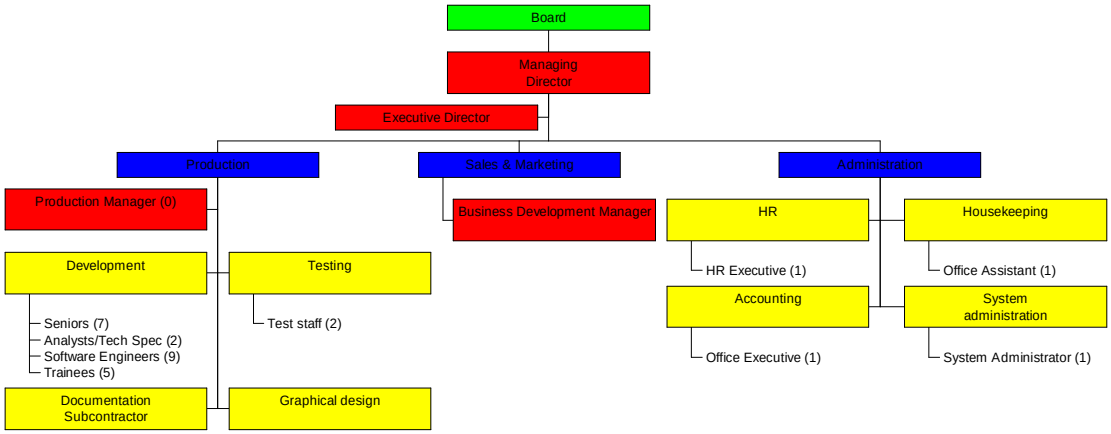

Fig 2. Organisational structure of Gislen Software. (Documentation and Graphical design is currently done by 2 subcontractors. A Production Manager is to be employed). Key management employees/functions are represented by red boxes(or dark gray in b/w)

Production equipment

The company uses state-of-the-art Personal computers, a modern switched fast internal network, Microsoft NT, Novell and Linux servers and last, but not least, a leased line for connection to the Internet. All computers are connected and all employees can receive and send emails as well as browse the Internet. We also use ICQ, a software tool, which makes it possible to communicate directly with clients by "chatting". The organisation also uses the latest development tools: Microsoft Visual Studio for technical and database development, Inprise Delphi for RAD development and prototyping, JBuilder for Java

development, various SQL Server technologies including Microsoft SQL Server and Oracle 8i, Rational Rose and Visio Professional for class designing and modelling

Finance and compensation

Cash flow limitations due to fast growth has, from time to time, limited Gislen's growth and development, but it has also forced the management to keep the organisation lean. No dividends have been paid so far and the management staff receive relatively low salaries compared to what is normal for this kind of organisation. The experienced line employees earn relatively high salaries, since US software companies are actively recruiting experienced Indian programmers. New, inexperienced staff is not paid so highly, but as soon as they demonstrate that they can produce results they get substantial increases (on average 60% per year) in addition to other perks and benefits.

Staff

The technical and management staff are well-educated, with the majority having or pursuing their post graduate studies. The company sends staff for various courses and training programs and is also planning internal training in the area of project management, personal development and the new quality program.

Partnerships

Gislen Software is a Microsoft Certified Solution Provider and has partnerships with one American and two Swedish Software Organisations. A Company called Axiom Computer, LLC, has recently been set up in St. Paul, Minnesota to handle US Sale (http://www.axiomcomp.com/).

Process

Until recently the company has not followed any strict development process. For every client a process has been developed or has evolved over time. Over the last few months however, we have appointed a Canadian consultant to help us to map and redesign our

processes. So far the Millennium (Re) Design Team, as the group is called, has defined a generic process and applied it to the various customer relationships we have. The next step is to define improved processes. Gislen Software is mostly using an iterative development model[iii]. To further understand the software process and the quality issues related to these, the reader is encouraged to take a look at CMM (The Capability Maturity Model)[iv]

Analysis

The parties in the network

It is important in understanding a Software consulting company as a knowledge company, selling services, and interacting with clients – a process that goes far beyond normal customer/vendor relationships. Gislen Software builds long term partnerships with its clients. Often, clients help in the sale of the company's services to their own partners or customers. Here, the Network model, which we described earlier, can be used to describe the interactions and relationships between the various actors inside and outside the Company. Actors in this sense would be the decision-makers: in the client's case, often a technical manager. At Gislen Software these would be the Managing Director, The Business Development Manager and some of the Project leaders. The resources are project leaders and individual programmers working on the projects. Examples of Activities are when a decision-maker at Gislen Software after discussions with the decision-maker on the customer's side, (Actors), puts together a team to develop a certain project. Another example is when more resources are added, or staff is sent overseas to work on the customer's site or when problems arise and various actions are taken. Since some resources are also actors the actual relationships are very complex.

Relationships in the network

In long-term relationships between Gislen and its customers, which can go on for years, different relationships develop. There are strong Resource-ties where the Project Leaders and Programmers learn over time a lot about the client or the client's processes and

product line. The Actors on the client's side very often get possessive about these resources. For these customers, often strong Activity-links also exist, where the clients and Gislen's processes are inter-linked and the client offers services to its clients, taking on some part in project management, integration and testing. Finally, in many cases there are also strong Actor-bonds, which consist of partnership agreements and advanced technical interaction, where the client can take part in educating Gislen's resources to ensure that they can fulfil the requirements.

The problem of the Resource-ties

After having used the network model to see how Gislen interacts with its clients, I will now focus on some specific marketing aspects. As we mentioned in the introduction, Customers are often possessive about the Line employees while employees think that this hinders their long-term growth. Likewise, strong relationships are factors which build strong bonds and which are healthy. To add substance to this assertion all employees were asked to give their main work-motivating factor. Out of a choice of technology, career path, opportunities to go abroad, salary, good working environment and welfare, technology by far outranks the others[v]. To retain technical staff is probably more difficult in India than in western countries since the average age of the programmer is lower and therefore he/she can re-locate more easily. The local market does not give such attractive opportunities to work with the latest technologies, whereas US companies offer excellent opportunities for young Indian programmers to go abroad.

Axelsson mentions the same problem we discuss – "How to get the organisation and not 'just' the individual to be seen as the party with which they work". He mentions solutions such as:

- Building Processes for internal information
- Knowledge transformation. to convert learning on a project into learning for the organisation, instead of just developing individuals

- Develop the entire organisation - Create learning organisations and develop systems for learning"[vi].

But there is more than one reason why the actors are so possessive of resources. A particular person has often proven him or herself in delivering to the client and the client thinks that changing to interact with someone else would be a serious risk. Since Gislen has not, until now, had a serious discussion about repeatable processes, this has often been a valid risk to the customer. But by building repeatable processes and having more than one person working for the same client on the same project at any given time, the unhealthy resource tie would become weaker. Axelsson says that Quality assurance of non-standardised services is very difficult and takes a lot of time and effort. But since increasing the quality improves customer satisfaction and can therefore give repeated orders it is certainly worth it for other reasons as well. Gislen has recently employed people who are working as testers in an independent group. These people write test-plans based on the customer's specification and test the software independently from the developers. Because of this, the customer can expect higher quality regardless of who has developed the software. Since the client rarely directly interacts with the testers, the resource-tie, which so easily is developed with the programmer, would not be a problem here.

Advantage of strong actor-bonds

While personal relationships can become a problem on the resource side, it is often an advantage on the decision-making side. The Actors are looking for long term relationships between organisations and therefore personal relationships are built up better between the decision-makers on both sides. The understanding and knowledge being built up here creates very strong bonds, which in such relationships is normally very healthy.

Conclusions

Result

The interactions between knowledge-based companies such as Gislen Software and its customers are very complex. It is even difficult to precisely apply the model since the interaction between the organisations occurs at all levels. We have tried to show how the model can be used to describe the relationship between Actors (decision-makers), Resources and Activities and how there are problems especially due to the strong possessiveness of the clients' decision-makers towards the personnel at Gislen Software. At the same time there is a strong desire from Gislen's side to weaken this tie since staff are occasionally leaving the company in order to learn new technologies elsewhere.

Suggestions

In order to weaken the resource-ties without decreasing the level of customer satisfaction several steps can be taken:

- Always have a backup person, i.e. at least one other person who knows most things about the project. One of Gislen's clients suggested that 'their' key resource could be working 70% for them and 30% for someone else.
- Implement good repeatable processes so the client knows that his projects will always be handled in the same way whoever runs the project
- Testing and follow up to be done by staff who are independent the developers to ensure more consistent quality standards.
- Increase and improve communication with clients.

References

Most information about the organisation is taken directly from the author's own experience, but all data has been checked with other members of the management team to ensure that it is correct. Some information can be checked with the company's web-site http://www.gseindia.com/

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[i] Axelsson page 387, quoted from Donald Cowell ***The Marketing of Services*** (1984) where he talks about the 7Ps for service companies: Product, Price, Place, Promotion, Personnel, Process and Physical environment

[ii] According to the author's experience after living for 6 years in India the costs are about the same in Indian Rupees and Krona, the salary level for Software professionals are approximately the same in Rupees and Krona while the exchange rate is 5 Rupees per Krona. Having said that, luxury items would follow international cost levels but certain food essentials such as rice, wheat flower, vegetables are cheaper than this level. Working class people also earn considerably lower salaries than the Swedish working class.

[iii] There are 2 general paradigms when it comes to software development processes – The waterfall model and the Iterative or recursive development process. The Waterfall model is normally applicable to very large, high budget projects which are well defined and where the requirements do not change over time. The Iterative model is more applicable to smaller projects and where the requirements can change over time or are not well defined in the initial stage of the project. However, whichever model you use there are a few steps, which are mostly the same: Receiving or mapping Requirements, Pre-study or Understanding document, feedback and corrections, Design documents, feedback and correction, Development, Testing, and Delivery. Maintenance can also be linked after this order. The difference between waterfall and iterative model is that in an iterative development process you go through these or some of the steps more than once and refine the documents or products. The advantage of the iterative process is that if something is wrong in the requirements the development team have a chance to correct this without spending too much time and money. There are, however, hybrids between the two models, where you use waterfall for the wholeness and iterative for the modules or the other way around.

[iv] CMM (The Capability Maturity Model) is a framework, which describe the implemented processes for Software organisations at different maturity levels. All companies, which do not have a repeatable process, are defined as CMM Level One companies. Here you will find at least 90% of all software companies. What characterises these organisations is that they are based on individual 'heroes' who are able to deliver successful results, more based on their own ability, than on the organisation's quality. Level 2, is for companies with a repeatable process, where the process is starting to mean more than the individual. Level 3 is called the Defined level. Here the processes are also documented and the organisations understanding of its processes are increasing. Level 4 is the managed level, where the organisation sets quantitative goals and follows up on these and Level 5, which has only been achieved by a handful companies, is the Optimising level where the entire organisation is focused on continuous process improvements.

[v] Out of 24 responses 13 marked technology as the most important factor while 7 selected it as the second most important. The second most important was career path, where 5 selected it as the most important and 10 as the

second most important. Opportunities to go abroad, Salary, Good working environment and welfare were almost equal and did, all together receive 5 first and 6 second most important. 3 programmers did not respond.

[vi] Axelsson Page 385 point h. Authors translation from Swedish