2007

Best Practice Re-Creation as Transfer of Fluids

J Alphonse
University of Oslo, johna@ifi.uio.no

BEST PRACTICE RE-CREATION AS TRANSFER OF FLUIDS

Alphonse, John, University of Oslo, Gaustadalleen 23, P.O. Box 1080 Blindern, 0316 Oslo, Norway, johna@ifi.uio.no

Abstract

Successful transfer of knowledge can be a significant source of competitive advantage for an organization. Such transfers have not however been easy and re-creating best practices in particular have been shown to produce high variances in outcomes. We see the 'social' aspects of knowledge and the transfer process as a complexity contributing to the variances. With the aim of increasing our understanding of these complex social knowledge transfers, we study the best practice re-creation of the system for selling mobile content from Norway to Malaysia. What was successfully accomplished here was to change the way mobile content was transacted in the whole Malaysian market. Using developments in the ANT literature, we use the 'fluid' concept as a framework to analyze the transfer process. We show how viewing best practices as fluids aids our understanding on how to manage such transfers successfully. Fluids have unclear boundaries, multiple identities and changing ownership. Shifting ownership and control in particular helps create the flow necessary for transfer.

Keywords: knowledge transfer, best practice, CPA, mobile content, fluids, identity, ownership

1 INTRODUCTION

A particular form of knowledge is addressed in this paper. It is what Dosi, Nelson & Winter (2000) refers to as an organization's ability to perform – to create a product or provide a service. That ability to create and utilize such knowledge is an organization's most important source for sustainable competitive advantages (Nonaka, Toyama and Nagata, 2000). The efficient transfer of that knowledge within a multiunit organizations makes that organization more productive than those that are less efficient in doing so (Argote et al, 2000). The existence of Multinational Corporations (MNCs) is based on inter-firm knowledge creation and transfer being more efficient than that of the market (Kogut and Zander, 2003). Further in MNCs, the creation of knowledge occurs at dispersed locations (Dinur, 1999) and there are opportunities to integrate and re-combine knowledge across a number of organizations (Zander, 2002). Groups of organizations operating similar businesses can learn from each other's experiences (Ingram and Simons, 2002) with the experiences in one context also acting as a testing bed for the other businesses (Kluge, Stein and Licht, 2001).

Knowledge transfer across organizations are however often laborious, time consuming and difficult (Szulanski, 2000) and groups of organizations often fail to leverage knowledge they have of existing best practices within an organisation (Szulanski, 2003). In health care organizations, even best practices and policies that could save patient lives are rarely adopted widely and those that are adopted, experience high variations in outcomes (Berta and Baker, 2004). Further evidence of the difficulties in sharing knowledge and transferring best practices for value creation is shown in studies of mergers and acquisitions. The performance of post-merger companies by: 1) stock market performance, 2) accounting financial results and 3) market share increases, when compared with similar companies which did not merge, showed in the majority of cases no positive gain for the merged organizations (Berggren, 2003).

So why is knowledge transfer difficult? The word 'transfer' whether as a description or metaphor beguiles a certain simplicity. Carlile (2004) argues that the usage of this word stems from Shannon and Weavers approach to information and communication. The concept of moving bits and bytes within IT systems in an organization had been extended over time to cover the learning, adoption and implementation of business practices. But what is being transferred are not 0's and 1's but knowledge which has been socially constituted and the transfer process mediated by social processes. The 'social' then is the fundamental difference between the information processing transfer and the complex social knowledge transfer. The social dimension provides a strong theme for explaining the difficulties with transferring knowledge – Some of the major reasons cited for the difficulties in knowledge transfer include a lack of a common language, coding or structure (Davenport and Prusack, 1998; Szulanski 2003; Dosi, Nelson & Winter, 2000); and a lack of Absorptive Capacity (Cohen and Levinthal, 1990), where differing prior experiences leads to less understanding and subsequently transfer.

In order to examine this complex social knowledge transfer, we study the Norwegian mobile operator Telenor's knowledge transfer of the system for selling mobile content in the Norwegian market to its subsidiary in Malaysia, DiGi. The system, known as the Content Provider Access (CPA) system was considered a best practice by Telenor which it intended to try and re-create in the companies and markets it had interests in, DiGi and Malaysia being one. The system required cooperation among all the operators. So, knowledge would not only have to be transferred to DiGi but to all of DiGi's competitors as well. What was actually intended, was to change the system in which mobile content was transacted in the whole Malaysian market. It was comparatively easier for Telenor to do this the first time in Norway as it was the incumbent dominant player with more than 70% market share. DiGi was however the 3rd largest operator in Malaysia with 17% market share. Norway and Malaysia as well in terms of economic and social development were very far apart. With such organizational, social and market differences it was a transfer which was more likely to fail than to succeed.

Nevertheless, a year later, the Norwegian CPA system had been re-created in Malaysia with all the operators and content providers adopting the system. Even more impressively, another year later, DiGi had achieved 80% of the current ARPU (Average Revenue Per User) of Telenor in Norway for mobile content. This made this best practice re-creation the most successful ever achieved by Telenor till then. One contribution this paper will make is to describe the details of how this knowledge transfer was achieved. This would be an important contribution given the importance and difficulty in achieving successful knowledge transfers and best practice re-creations.

Although related to the 'social' another source of difficulties in knowledge transfer and best practice re-creation, in particular, is the fact that these practices do not stand alone. Best practices comprise of a coherent system of routines and often form an inter-connected network with technical and social systems. The best practice cannot be changed piecemeal without affecting the total performance. It is trapped within a local optimum (Narduzzo, Rocco & Warglien, 2000). This forms another interesting aspect of our study as Telenor did in fact adopt a piecemeal approach to the transfer. Yet, another way of viewing a best practice is not as objects, piecemeal or whole, or even as a network but in a different paradigm more in terms of the 'space' it occupies as opposed to the 'shape'. This is the second contribution of this paper, to use the concepts of 'fluids' from the developments of the Actor-network Theory literature, as a theoretical model to further our understanding of best practice re-creations.

2 FLUIDS

ANT in its original form tells that entities "acquire their attributes as a result of their relations with other entities" (Law, 1999, pp 3). An entity or object is then "an effect of stable arrays or networks of relations" (Law, 2002, pp. 91). A best practice would be such a network made up with various actors having fixed relations between them. Re-creating the best practice would be re-creating that same actor network in a new context. This would be both a reasonable and useful way to view best practice re-creation. The discussion would be on how the interests of the various actors get translated so that enrolment in the actor network is achieved. The emphasis would inevitably be towards creating a fixed and stable actor network implying fixed and stable relations between the actors. However, firstly our focus would then be on relations and stability and not on flows (transfer). Secondly, a stable network with fixed relations doesn't always represent reality. The fluid concept has been used to describe entities whose flexibility made it more adaptive and robust. Fluids travel well and can be shaped and re-shaped. A study of fluids is a study of flows (Mol and Law, 1994) which is our intended focus of knowledge transfer and best practice re-creation.

Fluids were first used to describe the disease anaemia. Here Mol & Law (1994) argue that some entities are not defined by fixed boundaries or fixed relations thus making viewing them as regions or networks inapt. The fluid space has the characteristics of having firstly, no clear boundaries. There is no clear starting point or ending point (as would be the case of a region) or point of passage (as would be the case of the relations in a network). "In a fluid space it's not possible to determine identities nice and neatly, once and for all or to distinguish inside from outside, this place from somewhere else. Similarity and difference aren't like identity and non-identity. They come, as it were, in varying shades and colours. They go together." (pp. 660). Secondly, a fluid is a mixture and made up of heterogeneous entities. These entities may or may not be fluid themselves. It may not be possible to separate the individual components of a fluid or to mix them. Thirdly, fluids are robust. They can be shaped and re-shaped and are continuous even within such transformations.

de Laet and Mol (2000) describe technology (in the form of the Zimbabwe Bush Pump) as "fluid". A fluid has six characteristics some of which are closely related. A fluid has: no clear boundaries; multiple identities; mixtures; robustness; continuity; and dissolving ownership. We will consider each of these characteristics. Possibly the most important and defining characteristic is that the boundaries of a fluid technology are not clear. Boundaries are defined by all that is needed to make the technology

work. This leads to the second and closely related characteristic of multiple identities. There are many answers to asking the question "What is the Zimbabwe Bush Pump?" It is a water pumping device, a hydraulic system, a sanitation device, a health provider, a community builder and a nation builder among others. Each identity has its own boundaries that are defined by what is needed for the technology to work as that identity. The boundaries are different for each identity and change over time. The identities themselves are not stable and change over time and in different contexts. Some identities may be emergent resulting from collective use of the technology reaching a certain level, e.g. nation building and water infrastructure. Some identities of the technology are defined by elements in its environment and not by its own elements. As a consequence of the multiple identities, the fluid can be said to be robust as it is successful or unsuccessful based on which of its identities is working or not working. It is not clear when it stops acting, achieves its aims and when it fails and falters. In the case of the Bush Pump, some components could be substituted or done without. It is however not that kind of robustness which is conveyed. Lots of things can make the pump stop working. The robustness arises from its multiple identities and comes from its multiple purposes providing no single weak link that can make all the identities come apart. The fluid is also continuous. It may have existed before but not in the same way. When new systems come in, old systems do not disappear. The fluid technology may be specific and unique but share characteristics with others, a family resemblance, which forms continuity. The fluid technology is also a mixture. It is part of other elements which could be fluids themselves. The mixtures however have a need to collaborate with each other if the technology is to work. The collaboration does not have to be rigid and can be flexible and adaptive. Finally the fluid technology has a dissolving ownership. The ownership is fluid in itself allowing the technology the flexibility to have unclear boundaries and multiple identities.

Global fluids are described as the "uneven, emergent and unpredictable shapes that such fluids take" as they "create over time their own context for action rather than being seen as caused by such a context" (Urry, 2003, pp. 60). Examples given by Urry include the Internet, Global brands and Social movements.

3 METHODOLOGY

We use qualitative case study methodology for this study. Firstly, qualitative research seeks to establish meanings of events or phenomenon has seen through the participants (Cresswell, 2003). Qualitative research is geared towards gaining a deeper understanding of human behaviour to uncover the reasons behind some of the events. Secondly, 'in general, case studies are the preferred strategy when "how" or "why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real life context' (Yin, 2003). Case study methodology is appropriate in our research as we are investigating contemporary phenomenon within its real life context and the boundaries between phenomenon and context are not clearly evident. The knowledge transfer we are researching exist only within the contexts in which they occurred. The research intends to describe what took place and will thus be descriptive and narrative as well as analytical and theoretical. The case study method will compliment and bridge the two purposes. The questions we are seeking to ask are definitely 'how' and 'why' and this is not a controlled experiment and the researcher has no control over events which is further criteria supporting case study methodology (Yin, 2003).

Most of the evidence collected was in the form of interviews which from Yin (2003) is the most important source of case study information. The interviews were open-ended mixed with structured questions in attempting to determine specific details but also to obtain the subjects opinions and perspectives, a view purported by Yin (2003). By talking to different people who have experienced the same events, multiple interpretations were obtained. This was useful for contrasting, comparing and identifying any possible biases. Where confidentiality was not an issue, documents such as presentations that were made or minutes of meetings were also obtained and studied. Being able to use

multiple sources of evidence is a major strength of the case study approach and increases its validity (Yin, 2003).

In total, 16 people were interviewed in Norway and Malaysia with an average of 2 hours per interview. Some of the key people were interviewed more than once. The interviews were held between January and June 2004. All the people in Telenor and DiGi that were directly involved in the transfer and implementation of the CPA system were interviewed. This included the Telenor CPA Manager, DiGi's Marketing Director, the two DiGi managers that were responsible for the CPA, the Telenor Project Manager that worked in DiGi on the CPA system and DiGi's CEO. Some of the people involved from the other mobile operators in Malaysia (Maxis and Celcom), Malaysia's TV3, and Howtraffic were also interviewed.

4 THE NORWEGIAN CPA SYSTEM

Telenor (Norway) introduced Mobilinfo, the first premium SMS (Short Message Service or known as Text messages in some countries) content system, in 1997. Premium SMS are SMSes that are charged at a premium rate, higher than the normal person-to-person rates. MobilInfo involved the mobile operator doing almost everything by itself, including creating much of the content and promoting it under their brand. The CPA System was introduced in late 1999 to co-exist with Mobilinfo. The CPA System was intended purely for revenue generation whilst Mobilinfo was kept for brand building, promoting often exclusive content as part of marketing activities.

In the CPA System, third party companies (companies that have no affiliation to the mobile operator) are provided an infrastructure to sell content to the mobile operators customers. A Content Provider (or CP is a company which has mobile content to sell) approaches the two main mobile operators, Telenor and Netcom. There will be a contract to sign, a connection fee and a monthly connection maintenance charge. The contract will specify the standard revenue terms which is based on a revenue share where typically the CP would receive 70% of the end-user price for which there would be pricing structures to follow. The CP will be assigned the same access number for both Telenor and Netcom. The access number is the number the customer sees and uses to buy the mobile content (typically in 2001, logos and ringtones). In Norway it is a 4 digit number (e.g. 2075). The CP would have to configure its Content Handling Platform (which manages the storage and retrieval of content) to connect to each mobile operator's CPA Platform (which handles the delivery and billing interfaces). Some CPs act as Content Aggregators where they offer their Content Handling Platform to smaller companies who do not wish to invest in a platform. Once connected, the CP is able to deliver his content as an SMS to the mobile operator's customers and obtain payment from the mobile operator. The mobile operator's customers will pay for the content as part of their normal billing arrangement with the mobile operator.

5 THE MALAYSIAN SMS CONTENT MARKET

Malaysia had in 2001, 5 mobile operators: Maxis, Celcom, DiGi, TMTouch and Time. Maxis was the largest company in terms of market share and profitability. Table 1 below gives a comparison of all the companies.

	Maxis	Celcom	DiGi	TMTouch	Time
Market Share (%)	32.5	27.5	17.5	15	7.5
Pretax Profit / Loss RM millions	777	-68	189	2.4	-44

Table 1. Malaysian Mobile Operators Market Share and Profitability for 2001

Each mobile operator would mostly sell content under its brand with a limited number of external CPs. Agreements with these CPs would typically have been individually negotiated with variances in the terms; the end-user price would be controlled and the majority of the revenue kept by the mobile operator. The SMS mobile content business was considered small and producing limited revenue. DiGi had a limited CPA type platform at that time and a few CPs connected to this platform. DiGi negotiated terms (and revenue shares) individually with each of these companies and set the end-user prices.

6 THE KNOWLEDGE TRANSFER PROCESS TO DIGI

In mid 2001, Telenor brought in one of their senior managers to be the new Marketing Director (MD) in DiGi. The new MD had been involved in the creation of Telenor's CPA System in Norway. Telenor however did not send him to DiGi because of his background with the CPA. As he put it '*I was not there to promote the CPA as such but knew it was a good concept*'. Around this time as well, Telenor had put together a small team to transfer knowledge of the success of the Norwegian CPA system to its affiliate companies.

In Sep 2001, with the support of DiGi's MD, two members of this Telenor CPA team travelled to DiGi to describe the CPA system. Their presentation described the various components of the CPA system: the connections and functions of the CPA platform; the revenue share model of 70% to the CP and 30% to the operator; standard terms to the CPs; cooperation among the operators on access numbers and pricing policies; and its success in terms of revenue generation. It was the first time that the DiGi managers had heard about the CPA system. After the meeting, no one from DiGi who was at the meeting contacted the Telenor CPA team in Norway nor was anything done in DiGi as a consequence of the meeting.

Around Oct 2001, the DiGi MD initiated a small team made up of a manager from Product Development and one from Mobile VAS (Value Added Services). Both of them had been in the meeting with the Telenor CPA team the previous month. They were given the task of revamping DiGi's mobile content business. One of the managers didn't initially see this as being connected to the Telenor CPA teams' presentation the previous month. The two managers came back to the MD with different options. Although they were aware of details of the CPA System and they did incorporate ideas from it, they developed what they felt was relevant for their context. In particular, they felt that the revenue share between DiGi and the CPs should be negotiable. A few meetings took place between the MD and these two managers. As the MD put it "*I was pushing them in the direction of the CPA system but not imposing it*". The two DiGi managers could see that some of the shortcomings of the current system could be solved with the CPA system. Those shortcomings included a limited advertising and promotions budget for mobile content and being unable to work with CPs with content they knew could generate revenue but weren't sure if they wished to associate with the DiGi brand. As this discussion progressed in DiGi and started to involve more people, there was some debate on the basic idea of opening up the value chain to external parties and giving them the major part of the revenue share. The thinking for some people in DiGi thus far had always been that DiGi should do its mobile content business largely by itself. But the MD was championing it and had the support of the CEO (also a Telenor expatriate).

The Telenor presentation in September and the meetings with the MD were largely on the concept; the DiGi managers were now also starting to grapple as one put it with '*how to actually launch*'. In the mean time, a Telenor Project Manager (PM) who had worked on the CPA in Norway was brought to Telenor's affiliate company in Thailand in Oct 2001 to assist with the CPA project there. His involvement in the Thai project would only last a few months and his girlfriend (working in Telenor) was being sent to DiGi. He knew the MD in DiGi and that DiGi was working on implementing the CPA system. He contacted the MD to ask if there was an opportunity for him to work on the CPA

project in DiGi. The MD discussed this with the CEO and after a while decided that they could use him on a six month contract to assist in the implementation. The Telenor PM was invited in Dec 2001 to have a meeting in DiGi with the Marketing and IT departments. One of the two DiGi managers that had been working on revamping the system said '*we did not see the light till this guy came and that it was all about one short code one rate*'. As the MD put it '*It was a matter of timing as well as content. They (the two managers) were more primed when he (the Project Manager) came in*'. Although there were no specific requests from the DiGi managers to have this Telenor PM work at DiGi, they supported the MD's decision to do so. Even before the Telenor PM started working in DiGi, the DiGi managers saw that they would need a new content handling and messaging platform. They also began to strategize how to approach the other mobile operators and how to seek final approval from the Ministry of Communications. At the higher levels of the organization, the MD with the support of DiGi's CEO, was able to secure the resources needed, in particular to develop a new messaging platform to support the CPA system. As a DiGi manager said '*he (the MD) was championing this with the management.*'

In Jan 2002, the Telenor PM started working as an 'Advisor' on DiGi's CPA Project. He worked closely within a team of local managers in DiGi. The team worked out the functional specifications for the CPA platform and invited proposals/quotations from a number of software solution providers. The Telenor PM provided knowledge of Telenor's CPA platform in developing the functional specifications. He also got statistics on usage and queue handling from Norway. On the commercial side, the agreement for CPs was taken from Telenor and worked upon by DiGi's legal personnel to adapt it for local laws and practices.

7 THE KNOWLEDGE TRANSFER PROCESS TO THE OTHER OPERATORS

In Jan 2002, DiGi's CEO brought up the CPA system and cooperation on access numbers at the monthly CEO meeting among mobile operators at the MCMC (Malaysian Communications and Multimedia Commission). This made it easier for DiGi to call for the first meeting with all the operators later that same month. However before the meeting took place, all the operators were invited for a meeting by one of the local television stations, TV3. The meeting consisted largely of a presentation by a Malaysian wireless technology company called Howtraffic. The previous year, the CEO of Howtraffic had won a competition for WAP development organized by Ericsson in Malaysia. The prize was attending the Mobility World Seminar in Washington in Mar 2001. One of the speakers there was John Strand from Strand Consulting who described the trends of the Scandinavian markets. The CEO talked more to Strand at dinner and that led him to see SMS as the tool for interactive TV. Howtraffic worked with TV3 to provide technical solutions for programs that required interaction with the viewers (e.g. voting). They saw the problem of 5 different access codes and sometimes prices, with the 5 mobile operators. TV3 wanted to help and called for the meeting with the operators on behalf of Howtraffic. The CEO needed the clout of the TV station to get the operator's attention. As he put it "*with only 3 days notice (for the meeting) all the operators showed up*". He also felt that they would see the value of the cooperation as "*only a few months ago they had SMS inter-operator connect and SMS traffic sky rocketed*".

The TV3/Howtraffic meeting added a little momentum to the meeting called by DiGi. For DiGi's meeting, there was some uncertainty about which department this concerned and all the operators sent mostly personnel from the regulatory and numbering departments. The MD (from DiGi) chaired the meeting and gave the introduction. As the MD put it "*We had a credible story and had a humble approach to the topic. We did not want to appear as coming there to teach them how to do business*". A DiGi manager then gave a presentation entitled 'The Content Market in Malaysia – A Common Approach'. The presentation covered the CPA system success in Norway, the advantage of this system to the mobile operators and content providers. TV3 and Howtraffic were presented as 'a real life

example' showing how common short codes and standard charges would make advertisements clearer and easier for the TV station, content provider and users. The meeting ended with a plan to meet again where the other mobile operators would give their feedback or other proposals on what was discussed. As one manager from one of the operators said "*we were keen to know what they were doing (in other countries like Norway) and take advantage of ideas. Not really different from what we can do*".

The second meeting was held in Feb 2002. This time people from marketing and product development were strongly represented by all the operators. Maxis presented their thoughts in the form of three possible systems. All three systems required cooperation on numbering and prices and one was the same as DiGi's proposal. Maxis appearing as involved as DiGi and the change in the composition of the attendees made a difference between the first meeting and the second. All of Maxis's systems were discussed by the group but the one which was the same as DiGi's was seen as the best option. Despite some opinions to the contrary, DiGi pushed for keeping the maximum value at RM 10 and for the access numbers to be 4 digits (as it was in Norway). It was agreed that DiGi would draft the proposal to MCMC and send it to the other operators for their feedback. One manager from the operators said "*Everybody saw the same need. All knew the content provider view, what would help them*". A manager from another operator said "*Not a big project (process/decision). Not 1001 different approaches. Everyone had a common understanding*".

After this meeting a discussion on email followed on the number of digits with both Maxis and Celcom seeing the need for it to be 5 digits to cater for a larger number of content providers and DiGi holding on to what was agreed in the last meeting saying that 4 digits would be easier to remember. In the end it was agreed to have 5 digits with each operator managing a number series according to its prefix (Celcom (019) – 39xxx, DiGi (016) – 36xxx, Maxis (012) – 32xxx, Time (017) – 37xxx and TMTouch (013) – 33xxx). The operators would let each other know which number they had assigned to a Content Provider so that the CP could have that same number with all the operators. A draft of the proposal to MCMC by DiGi was also circulated to the other operators. TMTouch brought up a new matter saying that since this involved the CPs directly, it should be discussed with the CPs to take their views into account.

The 3rd meeting was held in April 2002. The number system was confirmed along with a decision not to charge CPs for this number. Each operator would decide independently on setup, access and maintenance fees and disclose these amounts among the operators so that there would not be too large differences. Twenty-one tariff categories from RM 0.30 to RM 10.00 were also finalized. On TMTouch's wanting to involve the CPs in this discussion, none of the other operators saw the need. It was agreed to send the revised proposal to MCMC within a week but TMTouch said they would let the group know if they could meet this deadline. The proposal to MCMC was only finally sent in July 2002. TMTouch had by then pulled out of the discussion and was not one of the signatories in the MCMC proposal. TMTouch however subsequently cooperated with the other operators on what was agreed. On the whole process one manager from an operator felt it would have happened anyway saying "*If DiGi kept quiet, Maxis would have done something. It was good that DiGi did this because they had the business case. Because of Telenor they had more to say*".

8 DISCUSSION

8.1 Global Fluids

We start with examining the whole, reflecting on Urry's (2003) understanding of "global fluids". The CPA system is meant to accept any and all CPs and any and all content. The CP decides and takes the risk with regards to choice and price of content. If the content sells everyone makes money, if not, the CP can try some other content. If any authority doesn't like any content, the operators sanction or disconnect the CP. There was no restriction or even discussion on what technical solution the operators or the CPs should use. The CPA system was meant to accommodate different solutions.

There is no governance structure, no binding agreements among the operators. The only document was a proposal sent to inform MCMC. One operator did not put its name to that proposal and that did not make a difference in practice. The CPs have agreements with each operator and each their own separate terms. Telenor/DiGi wanted to have standard agreements and terms to the CPs they contracted with just as the Norwegian CPA system did. Some operators followed and some didn't and the Malaysian CPA system worked fine with that. Telenor/DiGi similarly pushed for 4 digit access numbers but finally 5 digit numbers were agreed and that worked fine too. The CPA system despite being a fairly complicated system involving a number of different actors, routines and technology was "fluid".

Another point worth reflecting on involves the introduction where we started by describing how research has been upholding inter-firm knowledge transfer as more valuable and efficient than the market. This case has shown however that the borders and distinction between inter-firm and market knowledge are not so clear. The fluid view exposes that putting things into regions or even networks and trying to clarify what is inside and what is outside does not always fit reality. For this practice, inter-firm and market, one country's knowledge and another, local and global, all co-exist as a whole. The global constitutes the local and vice versa and both are not static but interact constantly with each other. Strand, Howtraffic, TV3, SMS inter-operator connect, other operators, content providers and vendors, all contributed along with Telenor and DiGi to the CPA system being re-created in Malaysia.

8.2 A Fluid Core?

Does a fluid have a core? If it's family resemblance which guides inside from outside, belonging from not belonging, is there then a key characteristic or property?

Telenor were selective with regards to what knowledge they brought with them in their first presentation. They wanted to re-create the whole CPA system in Malaysia, yet only intended to transfer knowledge on certain areas. There were a number of reasons for this. Firstly, there are a lot of parts and details in a large system, some documented and some not. The two Telenor managers simply did not have all the details. Secondly, Telenor's CPA technical platform was considered too customized to be of any value outside Telenor. Thirdly, there were too many differences between Telenor and its role in the Norwegian market compared to DiGi and its role in the Malaysian market. How Telenor had implemented the CPA system and got the agreement of the other operator in Norway did not seem relevant for DiGi as their circumstances would be very different. Fourthly, what was considered the key and unique to the CPA system was letting the CPs drive the content business. The content business was not best run by the operator but by numerous small companies churning out a large variety of content. That made the CPA system a success story. As one Telenor manager said "*The CPA system is a systematic approach to content providers and a business system that works*". If there is a core perhaps part of it is in the form of a problem rather than a solution. The problem would be 'how to make it easy for content providers to develop the content business whilst keeping a profitable business for the operators?' It is interesting to think of the core of a best practice as a problem and then allowing the solution to emerge and grow in the new context. This fits in with the emergent and context filling description of global fluids.

8.3 Identity

In the case of the bush pump in de Laet & Mol (2000), the multiple identities were all aligned and pulling in the same direction. That alignment as the object goes through time and space is critical to the flow. It is however not always possible or even likely that the multiple identities all pull in the same direction. At the point when the Telenor managers made their first presentation in DiGi we see identities of the CPA system that were emphasized by Telenor as well as those that were deliberately down played. It was not portrayed as a technical solution. Technical needs would be assessed and determined later and internally within DiGi. It was also not really portrayed as a Telenor invention but

more as a success for the whole Norwegian mobile content market (operators, content providers and consumers). There was however one basic identity it carried that resulted in the DiGi managers not doing anything with it. It was seen as a solution to a problem the DiGi managers didn't feel they had. All best practices are in fact solutions of one form or another. Its creation was in fact a solution to a problem in its original context. The problem that this best practice is to solve in the new context may not be recognizable in the same form or prioritized as a problem that needed solving. The DiGi managers didn't know what to do with it and saw it as something not for them.

As the MD told them to work on revamping their existing mobile content business only then did they start to see and understand the problem for which the CPA system might be the solution. Over time the CPA system appeared not only as a solution but a good solution. The identity of the CPA system was still that of a solution but now it was a solution for them. The all important difference is that it was previously a Norwegian solution to a Norwegian problem but now a Norwegian (perhaps even a Malaysian) solution to a Malaysian problem. The shift occurred through a process of self-realization that they went through after the MD asked them to work on this. As their knowledge here increased so did their ability to see the possibilities with the CPA system. This is also supported by research on Absorptive Capacity (Cohen & Levinthal, 1990).

When DiGi described the CPA system to the other operators, the CPA system carried the identity of a success story and a global development. The Norwegian MD deliberately asked one of DiGi's local managers to make the presentation even though he or the Norwegian PM would have had added credibility. It was a deliberate attempt to manage the identities that could be associated with this. It was Malaysians talking about Malaysian problems and solutions. Using Howtraffic and TV3 as an example made that even more apparent. A turning point came in the 2nd meeting among the operators when Maxis made a presentation as well, showing interest and involvement. The identity the CPA system carried then was something that the largest operator in Malaysia was interested in. It was seen now as an initiative that was likely to take place. For the other operators it was now more a case of not wanting to be left out than a question of whether to join. That could be interpreted as having some level of pressure as well. The pressure however is an effect stemming from the actions of the MD and Maxis which could be explained by their having ownership to the process.

8.4 Ownership and Control

Who owned the CPA system in Malaysia at its origins is similar to asking who owned the transfer or re-creation process. The two Telenor managers had ownership when they came to Malaysia. The MD took on some ownership and at some point so did the two local DiGi managers. The Telenor PM took on some and so did more DiGi managers as the implementation project started and more people got involved. Strand, Howtraffic and TV3 took on some ownership and played their parts. Maxis took on ownership too and that created an impetus among the other operators. As important as taking ownership appears to be releasing ownership. The two Telenor managers played a supporting and background role instead of trying to control the process. The MD took a guiding role but also releasing ownership and control to the DiGi local managers and the Telenor PM. DiGi released some ownership to Maxis in the 2nd meeting letting them make the main presentation. The other operators all had to take some ownership and control when 'fighting' DiGi over the choice of 5 over 4 digit access numbers. DiGi had to release then too. The other operators took ownership of their individual and collective responsibilities as did the content providers in operating the system. The taking and releasing of ownership and control resulted in the flow. The credibility and position of the ownership taker also had an effect. Time (the smallest operator) taking the lead in the 2nd meeting would not have had the same effect as Maxis doing so. Howtraffic played its part but reached the limit of how far it could go after the TV3 initiated meeting. DiGi on its own may have also reached some limit with the operators. Combined with Telenor however they had more credibility and greater effect. In the end the final CPA system in Malaysia had numerous owners and parties with vested interest but perhaps no singular actor with any dominant ownership or control.

9 CONCLUSION AND IMPLICATIONS

When Telenor, or any other company, attempt's it's next best practice re-creation, what good would it do them to consider the practice as "fluid"?

Firstly, to understand that fluids do not have clear boundaries. In terms of the best practice, that makes determining what to actually transfer as an important decision. Everything is not possible, as it would be very difficult to determine what the best practice includes/excludes. It would also generally contain too much and be too complex to do. If a fluid core does exist we suggest that it should be in the form of a problem statement. A best practice is afterall a solution that addressed a problem in the original context. In transferring the solution there is perhaps a natural tendency to describe the solution before discussing the problem that this is supposed to solve. The problem in the new context may not be seen, exist in the same way or be prioritzed as a problem. This is related to a second fluid property, as fluids have multiple identities that are different from each other and to various groups of people. One identity a best practice could have is being a solution to a problem the new country doesn't have. Another identity could be that of something that is being pushed by the head office. Identities of the best practice maybe negative due to no fault of the best practice itself. This turns to how the transfer process is run. How the knowledge is packaged and can be viewed by the receiving parties requires consideration.

Thirdly, an important cause of the flow of a fluid is due to changing ownership and control. What is important is not only taking ownership but also releasing ownership. When transferring a best practice, what needs to be transferred is not just the knowledge but the ownership as well. How that is acheived is related to the various identities the best practice can have. An understanding of how the best practice could be identified by certain groups in a way that would make them want to take ownership and control needs to be considered especially when it is clear that a flow is not happening.

References

Argote, L., Ingram, P., Levine, J., Moreland, R. & Richard, L. (2000). Knowledge Transfer in Organizations: Learning from the Experience of Others. Organizational Behaviour & Human Decision Processes, 82/1.

Berggren, C. (2003). Mergers, MNES and innovation – the need for new research approaches. Scandinavian Journal of Management, 19, 173-191.

Bertha, W.B. & Baker, R. (2004). Factors That Impact the Transfer and Retention of Best Practices for Reducing Error in Hospitals, Health Care Management Review, 29/2, 90-97.

Carlile, P. (2004). Transferring, Translating and Transforming: An Integrative Framework for Managing Knowledge Across Boundaries. Organization Science, 15/5, pp. 555-568

Cohen, W.M. & Levinthal, D.A. (1990). Absorptive Capacity: A New Perspective on Learning and Innovation, Administrative Science Quarterly, 35.

Cresswell, J. (2003) Research Design – Qualitative, Quantitative, and Mixed Methods Approaches, 2nd edition. Sage Publications.

Davenport, T.H. & Prusack, L. (2000) Working Knowledge – How Organizations Manage What They Know. Harvard Business School Press.

De Laet, M. and Mol, A. (2000). The Zimbabwe Bush Pump, Social Studies of Science, 30/2, 225-263

Dinur A. (1999). What are the effective drivers of knowledge transfer in multinational companies?, Knowledge Management Review, 7.

Dosi, G., Nelson, R. & Winter, S. (2000). 'Introduction: The Nature and Dynamics of Organizational Capabilities' in Dosi, G, Nelson, R. & Winter, S. (Eds), The Nature and Dynamics of Organizational Capabilities. Oxford University Press.

Ingram, P. & Simons, T. (2002). The Transfer of Experience in Groups of Organizations: Implications for Performance and Competition, Management Science, 48/12, 1517-1533.
Kluge, J, Stein, W & Licht T. (2001) Knowledge Unplugged. Palgrave.
Kogut, B. & Zander, U. (2003). Knowledge of the firm and the evolutionary theory of the multinational corporation, Journal of International Business Studies, 34/6.
Law, J. (1999) After ANT: complexity, naming and topology. In J. Law and J. Hassard (eds.), Actor Network Theory and after, Blackwell Publishing, 1-14.
Law, J. (2002). Objects and Spaces, Theory, Culture & Society, 19/5/6, 91-105.
Narduzzo, A., Rocco, E. & Warglien, M. (2000). 'Talking about Routines in the Field: The Emergence of Organizational Capabilities in a New Cellular Phone Network Company' in Dosi, G, Nelson, R. & Winter, S. (Eds), The Nature and Dynamics of Organizational Capabilities. Oxford Univ. Press.
Mol, A. and Law, J. (1994). Regions, Networks and Fluids: Anaemia and Social Topology, Social Studies of Science, 24, 641-71.
Nonaka, I., Toyama, R. & Nagata, A. (2000). A firm as a knowledge-creating entity: a new perspective on the theory of the firm, Industrial and Corporate Change, 9/1.
Szulanski, G. (2000). The Process of Knowledge Transfer: A Diachronic Analysis of Stickiness, Organizational Behavior & Human Decision Processes, 82/1.
Szulanski, G. (2003) Sticky Knowledge – barriers to knowing in the firm. SAGE Publications.
Yin, R. (2003) Case Study Research - Design and Methods. SAGE Publications.
Urry, J. (2003) Global Complexities. Polity Press UK.
Zander, I. (2002). The formation of international innovation networks in the multinational corporation: an evolutionary perspective, Industrial & Corporate Change, 11/2, 327-354.