Non-Legal Aspects of Legally Controlled Decision-Making. The failure of predictability in governing the 3G infrastructure development in Sweden

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Abstract

Predictability is a key function of law. When the application of law goes from being flexible to becoming unpredictable this key function is lost. This article shows how legal application can deviate from formal agreements and law, how legal predictability experiences a setback when other forces or values affect the decision making that is supposed to be strictly legally controlled. Non-legally acknowledged factors can affect the decision-making tacitly. This means that causes like economy and politics can affect the application of law, although not admittedly, and the legislative process in order to change the application.

The example used for this demonstration is taken from the Swedish development of the third generation of mobile phone infrastructure, 3G, and more specifically the responsible authority's, the Post and Telecommunications Agency, supervision of the four licence winning operators during the infrastructure roll-out.

The paper addresses the difference between the intentions of the law and the application of the law, analyses and aims to explain parts of the legal complexities or inconsistencies from a socio-legal perspective. To do so, data permit process data from a regional case collected within a MiSt study (Larsson 2008) is used, along with legal documents, cases, PTA reports and more.

In Håkan Hydén &

Per Wickenberg (eds.)

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Introduction

Predictability is a key function of law. Predictability is "one of the basic values in democracy and a state governed by law" (Peczenik 1995, p 89f.). Many legal theorists hold the norm of "jurisdiction and the actions of public authorities in a democratic state should be predictable" (ibid, p 90), as the very essence of legal security. When the application of law goes from being flexible to becoming unpredictable this key function is lost: the preconception of knowing the rules of the game, before and when playing the game. A governmental authority is expected to apply law in a predictable, transparent and non-discriminatory way. This article shows how legal application can deviate from formal agreements and law; how legal predictability can experience a setback when other forces or values affect the decision making that is supposed to be strictly legally controlled. The example used for this demonstration is taken from the Swedish development of the third generation of mobile phone infrastructure, 3G, and more specifically the responsible authority's, the Post and Telecommunications Agency (hereinafter the PTA), supervision of the four licence winning operators.

The 3G infrastructure in Sweden has been developed between 2000 and 2007 and the PTA is the authority responsible for supervising the sector, as well as the operator developing the infrastructure. Initially, within the course of three years four operators were to build competing systems to cover 99,98 percent of the population. This was determined as a result of the licence allocation process, the so called beauty contest where operators made promises regarding coverage and how fast to reach this coverage.

These coverage requirements were extreme in relation to other EU countries' licence conditions, and the operators failed to reach the promised coverage in time. In fact, it took twice the time agreed upon. Still the PTA did not order any sanctions, even if the legal provisions clearly state that possibility. Based on a regional sample of permit processes national coverage data and PTA reports, in combination with a legal analysis, this article shows the PTA and the operators' actions in relation to one another.

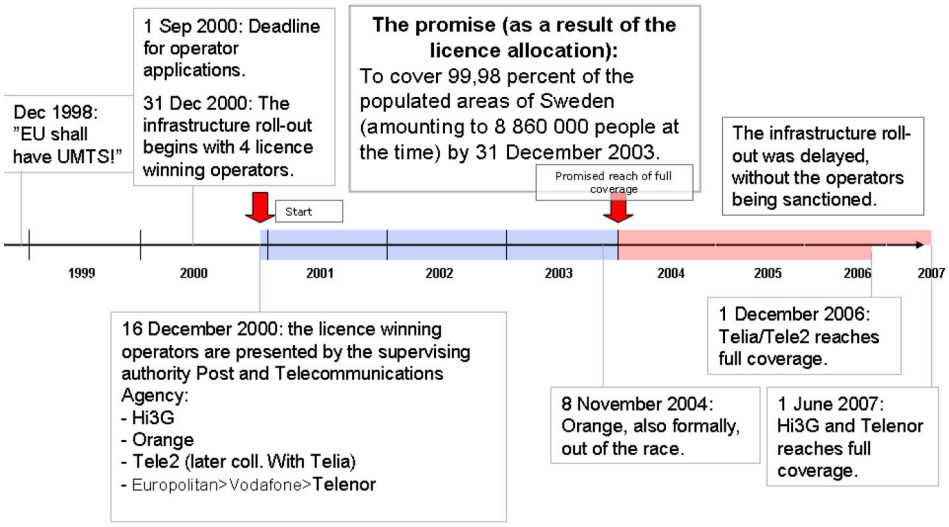


Figure 1 *The 3G development in Sweden*

The article focuses on the relation between the operators and the PTA, a relation regulated by law but also an agreement (upheld by law). It describes how non-legally acknowledged factors are likely to have affected the decision making of the responsible agency for infrastructure development without this being explicit during the development or foreseeable by the time of licence allocation. One could imagine that this difference is an obvious one, but the legal domain can be more complex than first assumed, and the deviations from the law in books has to be empirically investigated in a methodological way far different from the traditional legal method. The legal field to some extent lacks the method to detect flaws of the legal system. This task is therefore often what socio-legal researchers mainly take on, as a main research objective for sociology of law. Much of the data and results are based on a study within the MiSt-programme[1] presented in a licentiate's dissertation published in March 2008 (Larsson 2008).

Background

The PTA, is the "applier" of the legal order describing and setting the stage for the legitimate PTA actions against the operators. The PTA's role is mainly regulated in

1 MiSt is an interdisciplinary research programme on tools for environmental assessment in strategic decision making funded by the Swedish Environmental Protection Agency. The programme is coordinated by the Department of Spatial Planning, Blekinge Institute of Technology. See http://www.bth.se/tks/mist_eng.nsf See also Larsson, Stefan (2006, 2008) .

the Electronic Communications Act, the ECA. As an applier the PTA has to follow the legal order and, if deviating from it in some way, the PTA will most likely still formulate and legitimate this deviation in terms of the legal order.

During 2002, a time when many operators throughout Europe wanted to change the licence conditions they just had agreed to, the European Commission in a communication to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions in June 2002, stressed the importance of a predictable environment in the 3G development sector. Any modifications in the licence conditions should be "proportional, transparent and non-discriminatory" (Section 3.1 of COM(2002) 0301). The Communication from the Commission is an example of a principle in contract law stating: "Pacta sunt servanda", agreements must be kept.

The Swedish 3G infrastructure development has been analyzed from a planning perspective (Emmelin & Söderblom 2002), from a planning and environmental legal perspective (Emmelin & Lerman 2004), from a sustainability perspective (Larsson 2008, Larsson & Emmelin 2007) and from a spatial planning and sociology of law perspective (Larsson & Åström), and the licence allocation process has been analyzed as such by Hultkrantz and Nilsson (2001) and Andersson et al. (2005).

Research questions of the paper

The article shows the relevant legal framework, including the most important licence conditions binding the operators that received a licence in 2000. This framework is especially interesting in comparison with the actual deviation from the formal licence conditions that occurred in the infrastructure roll out, and how this was handled by the supervising agency, the PTA, especially in relation to the operators that were to develop the infrastructure. The investigation of the legal framework alone, the "law in books", does not explain this deviation or the result of the application of the framework, the "law in action". The objectives of the article is therefore

1. to investigate and present the legal framework relevant to the relation between the operators and the PTA when it comes to the deadline of fulfilling the licence conditions.
2. to show the actions of the PTA and the operators in order to explain the delayed reach of coverage, and hence to focus *the application* of the legal framework.

The first question represents the law in books and the second the law in action. The article suggests a socio-legal approach to explaining the deviation between the formal law in books and its application. The first objective mainly requires legal sources of data. The second requires a socio-legal approach were data in form of PTA reports, operator applications as well as the contribution from other research made on specific parts or angles of the Swedish 3G development. It also requires a more elaborated

view on law and the legal system. This socio-legal approach needs further presentation.

Law in books, Law in action

When researching the empirical side of law, the distinction of law in books – law in action, often comes up.[2] The idea is that there are two sides to law, one dogmatic, often written down, and one empirical, which you only can find outside the dogma, for it is the application of law, the consequence. In other words, it is about the difference between intent and outcome, the difference between what you say, and what you subsequently do. This composition is reflected in the two objectives of the article, presented above. The research design is common in sociology of law research where first the legal design is presented and then the actual deviation from this design is measured or established through empirical data.

Sociology of law offers a set of perspective-giving tools, tools that allow for a different perspective on law and legal institutions. Sociology of law offers a way to question legal matters from a social scientific perspective, with social scientific method and theory. The relation between society, on one hand, and law and legal institutions on the other, is often the area of inquiry in the sociology of law discipline (Mathiesen 2005, se for instance p 18). In the governance and control of the spatial environment the legal frame plays a significant role. How the legal provisions are manifested in the factual sense, showing the empirical side of law, is one of the important fields of study in the sociology of law.

The method of finding *existing law* is legal dogmatic, but when questioning these findings from a socio-legal perspective the perspective of sociology of law is taken, which offers an analytical depth to the spatial planning context. This socio-legal perspective is often described as an external perspective on law (Bernt and Doublet 1998, Hydén 2002a). Whether or not you see it as an external perspective, the norm science approach has generated a number of studies in the sociology of law discipline as a way to focus and explain behaviour controlling entities that are socially reproduced (see Hydén and Svensson 2008 in this anthology) in addition to the legal system. The norm perspective has been used to analyze different topics such as the continuing process of a struggling tunnel construction (Baier 2002), traffic rule compliance (Svensson 2008) and the rise of environmental concern in school curriculums (Wickenberg 1999).

A way to describe sociology of law is the way in which it differs from legal dogmatics and how it complements it (see the introduction to this anthology, Hydén & Wickenberg 2008). Where the legal dogmatic perspective gives a very clear picture of what knowledge and what factors should influence legal decision making (repre-

2 The dichotomy is credited to Roscoe Pound, whose work was a forerunner to the legal realism movement.

sented vertically in the following figure), the sociology of law scholar can examine legal decision making empirically and see if there have been other factors, generally not explicit, that have influenced the legal decision making (represented horizontally in the figure 2 below).

In the case of the PTA supervision over the operators there is a significant usefulness to the sociology of law perspective. The legal order provides the framework for the PTA's actions, but when it comes to the precise decisions, the law has possibly been only one of several factors that have affected these actions. This is returned to below.

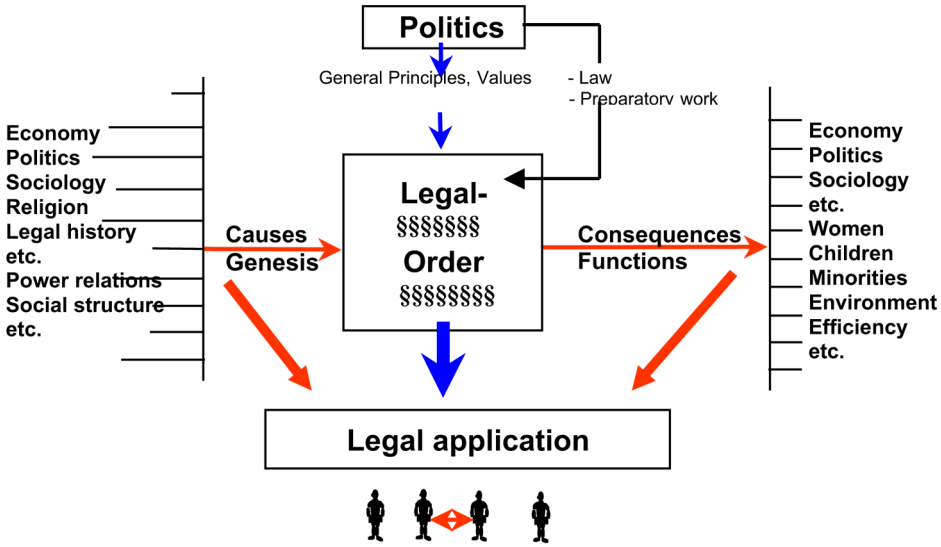


Figure 2 *from Hydén (2002b), p 16, see introduction to this anthology (Hydén & Wickenberg 2008)*

Generally, legal decision making is formulated such that it operates strictly under the principle of legality, that decisions are not affected by legally irrelevant factors such as politics and economy (to the left in the figure), from the horizontal outlook. It is the task of socio-legal science to show when such factors have intervened in the legal decision making. Another task is to show when the application of law leads to unforeseen, distorting effects in society, (to the right in the figure) such as environmental problems or when the legal application results in consequences that are undesirable from a norm perspective, which from a legal dogmatic perspective may be correct. This perspective helps in understanding the actions of the PTA in its relation to the operators in the 3G case. Before turning to the empirical side of the in the Swedish 3G infrastructure development the article now turns to the legal dogmatic perspective that regulates the relation between the PTA and the operators.

The PTA and the operators: The law in books

Before turning to the licence conditions and the specific law that applies to the relation between the PTA and the operators, let us take a brief look at the PTA's role as a whole, from the law in books perspective. What is the task of the PTA?

The duties follow under a governmental authorization, but the more detailed provisions are described in the Ordinance (2007:951) with instructions for the PTA. In addition to supervising the postal services and other sectors the PTA's duty among many is to

> 1 – Promote the access to secure and efficient electronic communications according to the goals of the Electronic Communications Act.
> 3 – Promote a sustainable competition (section 4 of Ordinance 2007:951 with instructions for the PTA, author's translation)

This means a further referral to the Electronic Communications Act and rather vague tasks such as to promote sustainable competition. The Electronic Communications Act (translation made by the PTA):

> **Chapter 1, General provisions**
> **Introductory provisions**
>
> **Section 1** The provisions of this Act aim at ensuring that private individuals, legal entities and public authorities shall have access to secure and efficient electronic communications and the greatest possible benefit regarding the range of electronic communications services and their price and quality.
>
> This objective shall mainly be achieved through the promotion of competition and the international harmonisation of the sector. However, universal services shall always be available for everybody on equivalent terms throughout Sweden at affordable prices.
>
> When applying the Act, particular regard shall be taken to the importance of electronic communications for the freedom of expression and freedom of information.

The PTA is not likely to be criticized on these grounds, but they show the purpose of the PTA in the electronic communications sector. Of interest is the promotion of competition and that the most important services should be available to everybody under similar conditions. More important here is to show the specific legal framework in the 3G case.

The licence allocation and the conditions following

The reason for discussing the licence allocation process here is because it gives some preconditions for understanding what part of the agreement the operators later breached and why.

On May 12th, 2000, the PTA invited operators to apply for a licence. The number of licenses was decided in April 2000 by the board of the PTA after the Parliament had decided upon the framework of the license process (PTSFS 2000:5). While various other countries had an auction concerning the licenses, the Swedish licenses were offered in a "beauty contest" to those who promised the highest coverage reached within the shortest time-span. The PTA regulations stated that "at the most four licences for a national coverage according to the UMTS/IMT-2000-standard will be available" (PTSFS 2000:5, §6). The intention seemed to be to reach the highest number of licensees, with regard to the services of the 3G that subsequently could be offered to consumers, as a result of a competitive operator market.

Four licences were to be issued, valid until December 31, 2015. The selection was divided into two steps where the contestants were reviewed using certain criteria. The initial evaluation of the contestants was conducted in order to review if they had fulfilled the preconditions for the establishment of a UMTS network. This included financial capacity, technical as well as commercial feasibility, and appropriate expertise and experience (PTA 12 May 2000, p 8-9 and Andersson, Hulthén & Valiente 2005, p 583). Five of the ten contestants failed to prove this (see Larsson 2008, p 23-27).

At the second stage of the beauty contest the operators were awarded points according to the extent and speed at which they offered coverage by the end of 2003, 2006 and 2009. Coverage was defined on the basis of three factors: proportion of population, territorial coverage and distribution throughout Sweden. The population constituting the reference data for the PTA was the statistical data from SCB by December 31, 1999 (PTA May 12, 2000, p 10). This is relevant in relation to the delayed roll out that later became the case, since it was primarily the urban population that grew in the years of the delay, making it slightly easier to reach the coverage demands when postponing the deadline. There had been some criticism of the licence allocation regarding whether or not the last few percentage points could be motivated by a combination of commercial and regional political reasons. The last few steps of percentage points were considered to be extremely expensive (Hultkrantz & Nilsson 2001, p 69, Emmelin & Söderblom 2002, p 47). And as a result of the delay, people moved in under the masts, so to speak, making it possible for the operators to avoid covering the last expensive percentage points in the sparsely populated areas in the north of Sweden.

The importance of good access throughout the country was stated early in Swedish broadband and 3G development (PTA report 27 June 2001, p 9). At the same time the PTA did not want to add a clause requiring too high coverage in the licences, fearing it would discourage operators to take part in the development of the 3G system, which was the case in the earlier application process regarding the GSM licences in the 1800 MHz spectrum (PTA report 27 June 2001, p 9). This is the reason for the application criteria where the applicant had to promise the coverage, and the promise of higher coverage beats the promise of lower.

The results of the so called beauty contest have been a roll out where Sweden differs from the rest of Europe both regarding speed and coverage. This is particularly

interesting regarding the uncertainties of the practical use of the system, the handsets and the applications, at the time of the decision (Emmelin & Söderblom, 2002, p 47-48). The process attracted a large number of applicants, and a large number of new entrants – comparable only to the UK process. Six contestants were not awarded licences.

Ten applicants competed in the beauty contest. Three of the competitors were the leading mobile telephone operators on the Swedish market: Europolitan, Tele2, and Telia. The remaining seven were consortia formed for the 3G beauty contest (Andersson, Hulthén & Valiente, 2005, p 584).[3]

Applicants/first stage	Second stage	Licence holders
Broadwave Communications AB		
Europolitan AB	Europolitan AB	Europolitan AB
HI3G Access AB	HI3G Access AB	HI3G Access AB
Mobility4Sweden AB		
Orange Sweden AB	Orange Sweden AB	Orange Sweden AB
Reach Out Mobile AB		
Tele2 AB	Tele2 AB	Tele2 AB
Telenordia Mobil AB	Telenordia Mobil AB	
Telia AB		
Tenora Networks AB		

Figure 3 *From Larsson 2008, p 25.*

The PTA decided that Europolitan (later Vodafone, now Telenor), HI3G (3), Orange and Tele2 should each get a licence. All four undertook to cover at least 8 860 000 people by the end of 2003. These licences apply up to and including December 31st, 2015, and the licence conditions until March 31st, 2006 (PTA decision of 22 March 2001, p 8).

Telia, Telenordia and Reach Out Mobile, which did not get a 3G licence, appealed the PTA decision to the County Administrative Court (Case nr 499-01). The County Administrative Court confirmed the PTA decision on 27 June 2001, without further appeal. The fact that Telia did not get a licence surprised many. Telia became part of the infrastructure development through collaboration with Tele2, which did get a licence. The three operators Hi3G, Telenor (Europolitan at the time) and Orange signed a deal regarding collaboration on the coverage requirements of the licence conditions.

The licence conditions stated that each operator had to have at least 30 percent of their own infrastructure and up to a maximum of 70 percent shared of the coverage (PTA decision of 22 March 2001, p 3.1). An estimation conducted for the PTA stated that the area coverage likely would be around 170 000 km^2, about 41 percent of the total Swedish surface area (Björkdahl & Bohlin, 2003).

3 Telia Sonera was founded January 1st, 2003, when Swedish Telia and Finnish Sonera joined.

An important licence condition regards the licence holders verifying, by March 1st 2004, that 8.860.000 people in Sweden are covered by December 31st 2003 (PTA 22 March 2001, section 1.1.2 and 1.3.1). Regarding the starting point of a functional network, the licence holders were to make net capacity available by January 1st, 2002 (PTA 22 March 2001, section 2). Another important aspect was that the licence conditions of the first period lasted until March 31st, 2006. After this date they could be reviewed, which they subsequently were.

Parts of the licence conditions, such as the maximum of 70 percent shared infrastructure, follow from set values that were decided before the so called beauty contest, and some conditions emanate from the contest itself, such as the degree of coverage and the speed of the roll out. The licence conditions themselves do not include any sanctions for the operators if they were not to fulfil the requirements. Instead, the sanctions have a more general description in the legal provisions controlling the Post and Telecommunications Agency.

The Electronic Communications Act

The Electronic Communications Act (2003:389), the ECA, came into force on July 25th, 2003 (prop 2002/03:110). The act replaced the Telecommunications Act (1993:597) and the Radio Communications Act (1993:599). The Telecommunications Act was in other words the main legislation controlling the introduction of the 3G development in Sweden. A number of changes had to be made to the law during 1999 and 2000 in order to be able to make demands of coverage in the licence allocation (decided December 8, 1999), to obligate operators to make available net capacity for other service providers, for the sake of competition (decided April 14, 2000) and national roaming (decided June 14, 2000).

The ECA covers all electronic communication networks and electronic communication services, which includes the role of the Post and Telecommunications Agency's relation towards the operators; the legal grounds for the agency actions that affects the operators. Since the ECA replaced the two earlier legislations on July 25th, 2003 it became the most relevant legislation for the relation between and the actions of the PTA and the operators.

The regulation in chapter 7, section 4 of the ECA, giving the operators reasonable time to voluntarily correct errors after notification from the PTA, had no equivalence in the former legislation (prop 2002/03:110, p 398). This possibility, the "reasonable time", was introduced in the Act just six months before the deadline for reaching the coverage requirements.

> If the supervisory authority considers that there is reason to suspect that a party conducting operations under this Act does not comply with the Act or the decisions concerning obligations or conditions or the regulations that have been issued under the Act … the authority shall notify the party conducting the operations about this circumstance and give it an opportunity to state its views. In the notification, the authority shall state that it may issue an order or a prohibition

> in accordance with Section 5, unless rectification takes place within a reasonable time. Reasonable time may not be less than one month, except in the case of repeated cases of violation, unless the party that is notified consents to a shorter time limit.

If the operators till after "reasonable time" fails to "rectify" the failure, of for instance to reach a promised coverage, the following section, 5, explains the rights that the PTA has as a supervisory authority to sanction the operator.

> If a notification in accordance with Section 4 does not result in a rectification, the supervisory authority may issue such orders and prohibitions as are necessary for a rectification to take place.
>
> If the order is not complied with, the supervisory authority may
> 1. revoke a licence, alter licence conditions or decide that the party that neglected the obligation should completely or partially cease the operation, unless the violation is of minor importance, or
> 2. issue such additional orders or prohibitions as are necessary for compliance with the Act or the decisions on obligations or conditions or the regulations that have been made under the Act.

To interpret the words "may issue" we have to look at preparatory work and the preparatory work states that "orders or prohibitions according to this regulation is in force instantly, if nothing else is decided, and can be combined with a fine" (Prop 2002/03:110, chapter 30, and section 22.2, author's translation), with reference to the specific law for fines (Viteslagen 1985:206), which states:

> When a fine is ordered, an amount is to be decided with reference to what is known regarding the addressee's economic circumstances and to other circumstances, that can be assumed to make the addressee to comply with the order that goes with the fine Section 3 of Viteslagen, (author's translation).

The fine is meant to sting, in order to make the addressee rectify the mistake instead of choosing to pay the fine. In the case with lacking coverage, which especially concerned the sparsely populated areas of Sweden, the investments required were large, and the fine could therefore have been expected to be substantial.

A comment in the preparatory work regarding chapter 7, section 4 is particularly interesting in the case of the PTA supervision of the operators' obligations under the licence.

> The circumstance that a party has not responded within the time frame the authority has given, does not hinder that the authority proceeds in its supervision. Neither do repeated or new and changed applications to the authority mean that the authority cannot proceed in its supervision, unless it is clear within the time frame that further supervisory action is unnecessary (Prop 2002/03:110, chapter 30, author's translation)

This will be returned to below, in the case where the PTA seemingly paused in the supervision over the operators whenever the operators appealed a decision or handed in an application for any matter. The preparatory work clearly states that the fact that the operators hand in new or changed petitions does not mean that the PTA should stop the supervision.

So, the law does not force the PTA to take action explicitly, it only states that it may. In most cases this is not a problem, because the PTA is bound to supervise the telecom sector such that it functions at its best (see provisions above) and in most

situations this means that the PTA needs to put pressure on a failing party. But, and this is an important but, when a matter is of such importance that it outgrows the Agency, the supervision and enforcement may not be of top priority to the PTA, even though this is never openly stated. This may be a weakness in the legal construction and can furthermore be said to be a weakness in the actions of the PTA. But without jumping to conclusions, it is time to tell the story of the actual rolling out of infrastructure, the PTA and the operators' interactions within this legal setting.

The PTA and the operators: The law in action

In order to depict the law in action in this case, a somewhat detailed story has to be told of the actions of both the operators and the PTA. But first, let us take a look at an overview of the actions whereby the operators try to postpone the deadline for the reach of coverage, which they only a few years earlier had promised to fulfil in order to receive the licence, and the response from the PTA.

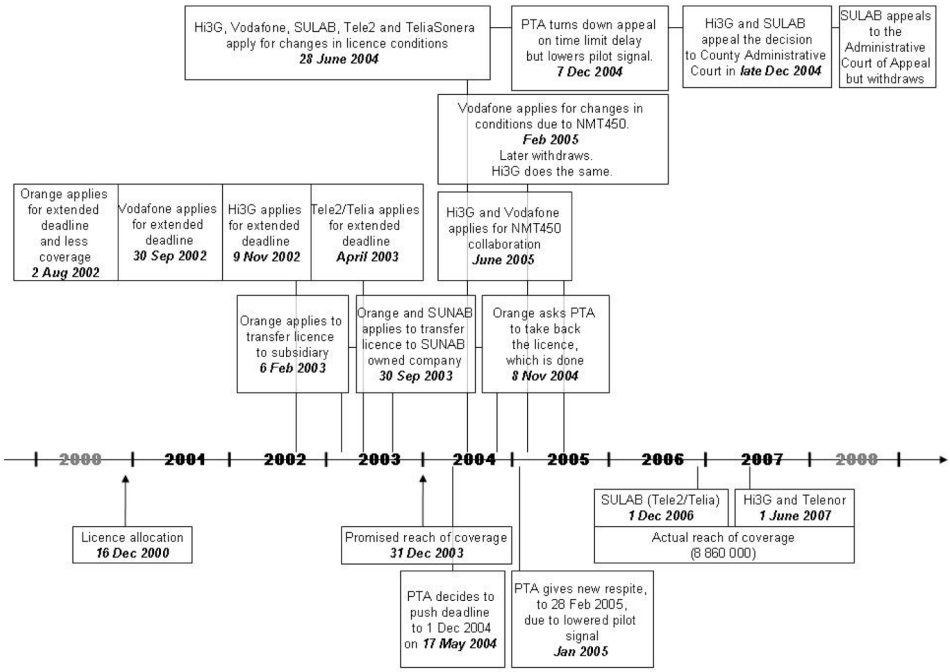


Figure 4 *Shows operator and PTA actions in the 3G infrastructure development in Sweden (Larsson 2008:62)*

The interaction between the operators and the PTA has been extensive. In order to see the reasons behind, the detailed story has to be told. When the operators already

in 2002 started to apply for an extended time limit, the PTA turned down the requests. Orange was first out in August, to apply for an extended deadline and less coverage, followed by Vodafone (which went under the name of Europolitan by now) in September and Hi3G in November, and Svenska UMTS-Licens AB (Tele2/Telia) in April the following year. The operators' requests were all denied (PTA decisions of 30 September, 25 November 2002 and 14 May 2003). The operators all pointed to the municipal permit handling process being slower than expected as the reason for the delay.

When the operators in April 2004 were confronted with the fact that they had failed to reach the coverage of the licence conditions stating December 31, 2003, the reported coverage had at the most been between 65-75 percent, when it was supposed to be 99,98 percent of the populated areas (PTA 10 March 2004). The operators were given "a reasonable time" to "voluntarily" (as expressed in the PTA decisions of 17 May 2004) rectify the lack of coverage, with a referral to the preparatory works of the Electronic Communications Act (prop 2002/03:110, p 398). The time limit for reaching the full coverage according to the licence conditions was postponed until December 1, 2004, meaning 11 months later than the original time limit. The PTA explained this by agreeing with the operators claim that the prerequisites for the construction had been changed after the initial licence agreement by factors outside the control of the operators. These factors where said to be a slow municipal permit process and that the assessment from a flight hindrance and telecommunications conflict perspective performed by the Armed Forces in different respects had delayed the processes (PTA decisions of 17 May 2004). The PTA concluded:

> In some respects the circumstances for the company have been changed in a way that could not have been foreseen at the time of application, and that has been beyond the control of Hi3G (PTA Decision of 17 May 2004, p 3, author's translation).

The same wording has been used in the decisions regarding all four operators. The wording is interesting, especially in reference to the time required for the permit processes. In what way had the conditions changed? And in what way could these "changes" not have been foreseen? Is this a legitimate reason for the coverage delay at all? To be able to answer these questions we have to take a look at the actual roll out empirically, which is done below and in more detail in Larsson (2008).

In the time following the decision, in June 28, 2004, all operators (but Orange), meaning Hi3G, Vodafone, SULAB (Tele2 and TeliaSonera) applied for a change in the licence conditions, which mainly concerned a delay in the coverage conditions to be fulfilled by December 31, 2007, and a lowered pilot signal in the sparsely populated areas. These operators' main arguments regarding the postponed coverage were that the permit processes had been taking considerably longer time than expected due to the public debate regarding the effects on the environment, cultural and nature values and the worry about electromagnetic radiation (PTA decision December 7, 2004, p 4). Parts of the arguments from the recent postponement decision by the PTA were re-used, but now with a bigger jackpot at stake: more than three additional years to reach the full coverage. The PTA found that the reasons to change the

licence conditions regarding the delayed coverage were not strong enough to change the conditions. This was partly based on a Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions from June 2002 – (Towards the Full Roll-Out of Third Generation Mobile Communications) stating the importance of predictability and stability in the regulatory environment.

> When balancing the benefits and drawbacks of a rigid application of the conditions determined by the issued 3G licences, the Commission is of the opinion that in principle the **licensing conditions should not be changed** because the sector is best served by a predictable environment. Predictability allows business cases to be established in a reliable manner and to be credibly defended when accessing investment funds (Underlining and bold letters are as in the text, 3.1 of COM(2002) 0301 and p 8 of the PTA 7 Dec decision).

And the communication continues:

> Changes to licence conditions should be envisaged only when circumstances have changed unpredictably and in these cases any modification should be proportional, transparent and non-discriminatory.

The pilot signal strength was lowered in sparsely populated areas, meaning a change of the licence conditions to some extent. The reasons that resulted in a delay of 6 months from the date of the PTA notice to the operators until December 1, 2004 (11 months from promised reach of full coverage according to licence conditions), were not considered strong enough to change the licence conditions. The operators were just given a respite. The reported coverage on December 1, 2004 was 84 percent for Hi3G, 86 percent for Telia and Tele 2 and 84 percent for Vodafone (PTA report January 27, 2005). The fact that the argument nevertheless ended in a respite means that the PTA gave the argument some credibility. On what empirical grounds the respite was given, is however unclear.

In late December, 2004, Hi3G and SULAB (Telia and Tele2) appealed the decision (in addition to the lowered pilot signal they had appealed the decision of not postponing the deadline) to the County Administrative Court (Länsrätten) on the basis that more areas of Sweden should be included in the lowered pilot signal requirements, in addition to the postponed time limit. The processes made the PTA accept a lowered pilot signal in some additional areas, which is for the benefit of the operators, and the appeal was withdrawn.

By January 2005 the PTA stated that since the licence conditions had been changed (lowered requirement in the way of measuring coverage in the sparsely populated areas) the operators should have a new respite to rectify the lack of coverage. This time however the respite was set to one month and by February 28, 2005 the operators should have reached the coverage of the licence conditions or the PTA "may issue an order" according to chapter 7, section 5 the Electronic Communications Act and the order may be combined with a fine (PTA report of 22 February 2005).

What is interesting here is that the changes of the obligations connected to the pilot signal in the rural areas of Sweden meant a beneficial way of measuring the coverage for the operators. It was this beneficial change (less base stations required for

the same degree of coverage) that gave the operators another respite, due to the "changes of the licence conditions". The logic here is not obvious. It is possible that the radio planning connected to these conditions demand some extra planning time, a reallocation of resources, which would support the need for extra time. This could on the other hand be balanced against the fact that the operators saved up to *one fourth* (according to the PTA press release of October 24, 2005) of the infrastructure costs of the remaining 15 to 20 percents of full coverage by the decision to lower the pilot signal (PTA decision by December 7, 2004, when the coverage was somewhere around 80-85 percent of the coverage requirements). This would be more than enough to outweigh any reallocation costs, and hence make the reasons given by the PTA not legitimate. The pilot signal was allowed to be lowered further in the so called buffer zone in October 2005 (PTA report of February 22, 2006, p 20).[4]

So on one hand, when it comes to the coverage percentage, the PTA stresses the importance of predictability and to not change the coverage requirements of the original licence conditions, and on the other hand, when it comes to the perhaps a bit more complicated pilot signal issue, the PTA changes the licence conditions in favour of the operators. Consequently, instead of changing the coverage conditions, the definition of coverage is changed. What happened when the operators in March 1, 2005 reported that the lack of coverage was not rectified? In fact, SULAB had not raised the level of coverage at all between December 1, 2004 and March 1, 2005, see table below. The story told on this issue in the PTA report from February 22, 2006 stops here. Nothing is said about the order that "may be issued" or the sanctions that could follow (see p 12-13).

	Coverage in percent of 8 860 000 persons		
Report date	**Hi3G**	**SULAB (Tele2 and Telia)**	**Vodafone**
December 31, 2003	68	74	66
June/July 2004	76	80	74
December 1, 2004	84	86	84
March 1, 2005	87	86	86

Table 1 *From PTA report of February 22, 2006, p 10.*

When Hi3G and Vodafone in June 2005 applied for the PTA to allow some of the 3G activity to be performed through an alternative 3G technology, the so called CDMA2000 in the 450 MHz band, the PTA decided to ask all operators if they could ensure the continued infrastructure development with this new technology. At the same time the PTA decided to await these results before issuing an order, com-

4 This buffer zone consists of the area that reaches three kilometres from the boundaries of the population centres for places with more than 1000 inhabitants according to the Statistics Sweden, SCB, as of December 31, 2000.

bined with a sanction, for the operators to rectify the lack of coverage. But why did not the PTA act during the three months following the reported lack of coverage in March 1? The PTA concluded, regarding NMT450 and 3G (UMTS), that there was no way to bridge the technologies without lowered quality for the consumers. For instance, there where no handsets on the market covering both technologies. The PTA turned down the request and through the application the operators again gained some time in the continuing strive for an adequate coverage. The decision came on October 24, 2005.

One of the operators, Orange, chose not to fulfil the commitment at a relatively early stage, resulting in, after a series of events, the Orange frequency spectrum being split between the three remaining operators. Orange applied in August 2002 for more time to develop the infrastructure for a lower coverage, without success. A PTA press release from December 19, 2002, reveals that the PTA found out from an Orange press release that Orange intended to withdraw its participation in the 3G infrastructure development in Sweden. The PTA had not been informed. Orange, on February 6, 2003, applied to the PTA to allow a transfer of the licence to a subsidiary company, GGG Licens AB, which the PTA denied on the ground that Orange was likely to be planning to sell this subsidiary company in order to withdraw the Orange contribution to the Swedish 3G infrastructure construction (PTA Decision April 23, 2003). On September 30, 2003, Orange and the Telia Sonera and Tele 2 owned Svenska UMTS Licens II AB applied to the PTA to allow a transfer of the Orange licence to Svenska UMTS Licens II AB. The PTA denied the request primarily based on competitive aspects; that the competition in the market would decrease resulting from the fact that SUNAB would be in control of two of four licences (see the PTA April 28, 2004 document referred for consultation, and PTA decision of May 26, 2004).

In short, Orange, from late 2002 to 2004 tried different ways to make use of the licence, all denied by the PTA realizing that Orange would not invest in a full infrastructure. During the fall of 2004 the PTA, on application from Orange, retrieved Orange's licence (PTA report of February 22, 2005, p 10) by a decision in November 8, 2004. Chapter 7, section 6 of the Electronic Communications Act states:

> A licence may be revoked and licence conditions amended immediately, if…
> …5. the licence holder requests that the licence should be revoked.

It should be remembered that the PTA has the right to request the operators to present documentation of the roll out with the penalty of a fine if they refuse (section 15, part 1, 4 of the abolished Telecommunications Act 1993:597, chapter 7, section 3, Electronic Communications Act). The PTA did not put much pressure on Orange during the time the company still formally participated in the 3G development, yet obviously showed no intent to fulfil the requirements. This once again shows the scope of action available to the PTA.

Twice the time

When the first licence period ran out by July 1, 2006 the coverage was between 93 and 94 percent of 8 860 000 people. The new licence conditions were favourable to the operators. The pilot signal in the outskirts of the urban areas was lowered, resulting in a higher coverage. With the lowered demands for the pilot signal the area to be covered increased to 98 percent. This is without any new base stations being constructed. On August 9, 2006, the PTA notified the operators when the full coverage should be reached, and the new dates were based on the operators' own estimates of when to be ready.

This means that the operators had managed to reach the end of the first licence period without completing the promised amount of coverage and without receiving expensive fines from the PTA. It also means that on the other side of July 1, 2006, the coverage requirements where lowered and dependent on their own estimates. The PTA had avoided heavy critique, as well as being sued by applicants that did not receive a licence. On December 1, 2006, about three years after the initial deadline for reach of coverage, the first operator (Tele2/TeliaSonera) reported to the Post and Telecommunications Agency, the PTA, that their common network had reached the coverage of 8.860.000 inhabitants of Sweden, followed by the remaining two operators, Hi3G and Telenor, 7 months later (PTA fact sheet of June 1, 2007, PTS-F-2005:5, p 6).

A change of circumstances that could not have been foreseen?

The story above leads to the important question of why the coverage was not reached in accordance with the licence conditions, which is one of the implementation issues of the 3G infrastructure construction in Sweden and, if the reason was not legitimate, why did not the PTA sanction the operators for breaching the licence conditions? The second question is returned to in the analysis below. Regarding the first question, the debated issue, or rather the used explanation, was the municipal handling of mast building permits the unforeseen hindrance of the infrastructure roll out. Or were the permit processes exceptionally slow, as often claimed in the numerous applications for changed licence conditions? What was it in the permit process "that could not have been foreseen at the time for the application"? Orange's application to postpone the deadline expressed (PTA decision September 30, 2002):

> "Orange assumed that there would be a wish to get UMTS-coverage fast, why the permit processes would be handled without delay" (author's translation)

Whose wish the company is talking about is left out in the discussion, but it is surely the municipalities' wish Orange is referring to, which calls for the question of whether the operators expected to get exceptional treatment when it comes to the permits? And on what grounds they expected this.

The PTA can sanction operators not fulfilling licence conditions through a considerable fine. The coverage by the end of the period was between 66 and 74 percent of the promised 8 860 000, with only three operators remaining. The first operator to reach full coverage was the Telia/Tele2 collaboration on December 1, 2006, followed by the two remaining operators (Hi3G and Telenor) that reported on June 1, 2007. The municipal permit handling was blamed for the delay, a reason that "could not have been foreseen", which helped the operators avoid sanctions from the PTA. It has been shown that a slow municipal permit process cannot explain the lack of coverage in some areas of Sweden, and therefore is not a fully legitimate reason for the delay (Larsson 2008). It was especially the coverage in the sparsely populated areas of Sweden that was neglected, which the licence allocation process so generously had promised would not be the case (Larsson 2008, p 124-127).

Analysis and conclusion

A quick conclusion is one that has already been told: The way the legal framework was applied regarding the supervision of the operators in the case of the 3G infrastructure development in Sweden cannot be explained from a legal dogmatic perspective. Something is missing in the explanation of the PTA actions.

One way to approach an explanation on some of the legally controlled decisions in the 3G case is to return to the horizontal perspective of sociology of law in relation to the vertical perspective of legal dogmatics. When having strict and clear conditions attached to the allocated 3G-licences and a governmental authority enforcing these conditions armed with legal tools of making it possible to order substantial fines, one would think that alternatives would be clear. Either the conditions are fulfilled, or they are not fulfilled and sanctions are imposed. Although the picture is not that simple, there are legitimate ways to stall the deadline as well, a certain scope of action. And some PTA actions can be explained in the vertical perspective, for instance giving the operators a chance to correct the lack of coverage within "reasonable time", but not all. Some of the delay of the PTA enforcement seems to lack explanation in the vertical, legal dogmatic, perspective. This is where the horizontal perspective is necessary as an explanatory tool.

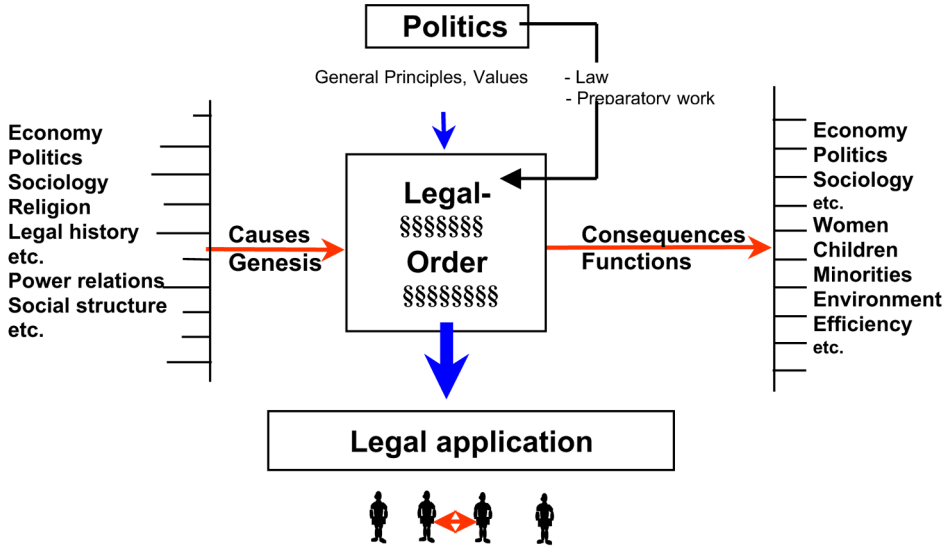


Figure 5 *From Hydén 2002b, p 16, see also the introduction to this anthology, Hydén & Wickenberg 2008.*

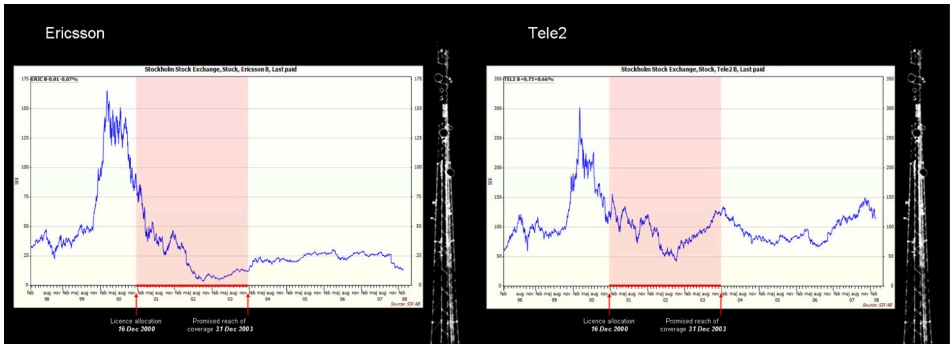
Figure 2, in chapter 3.0 above, has here been complemented with arrows pointing at the legal application, symbolizing the influence from economy, politics etc. The PTA is the "applier" of the legal order describing and setting the stage for the legitimate PTA actions towards the operators. The PTA's role is mainly regulated in the Electronic Communications Act, the ECA. As an applier the PTA has to follow the legal order, and if deviating from this in some sense, the PTA will most likely still formulate and legitimate this deviation in terms of the legal order.

While we should not safely assume that the agency is lawful in all its actions, at the same time the exact legal provisions are not clear in all cases, still to be defined by practice. The ECA sets the framework for the PTA; meaning that the PTA can have different strategies for how hard the PTA will control the operators, within this framework. Regardless if you view it as strategic freedom within a vague legislation or a breach of law and agreements, the outcome is clearly unpredictable and conflicting the intentions expressed in the planning stages of the development. It is acceptable to assume that both political values as well as causes like an IT-sector in a period of decline will affect the PTA application within the legal framework, or beyond the boundaries of the same.

In either case, it has included non-legal aspects to a decision-making that was defended by legal rhetoric. This means that the actions were affected by values that were not outspoken. This can be described as the societal forces in the horizontal dimension becoming so strong in the individual case that they push aside the legal regulation of the vertical dimension. Here there seems to be a bigger game unlocking the legalistic approach. It is in this sense that the PTA can both accept a delay in reaching of coverage, and at the same time claim that the licence conditions have not

changed and blame the operators for stalling the infrastructure development by referring to the legal order. The operators can, at the same time, point their fingers at the municipalities' unexpectedly slow permit process as the reason for the lack of coverage, which at least partly is not a fact.

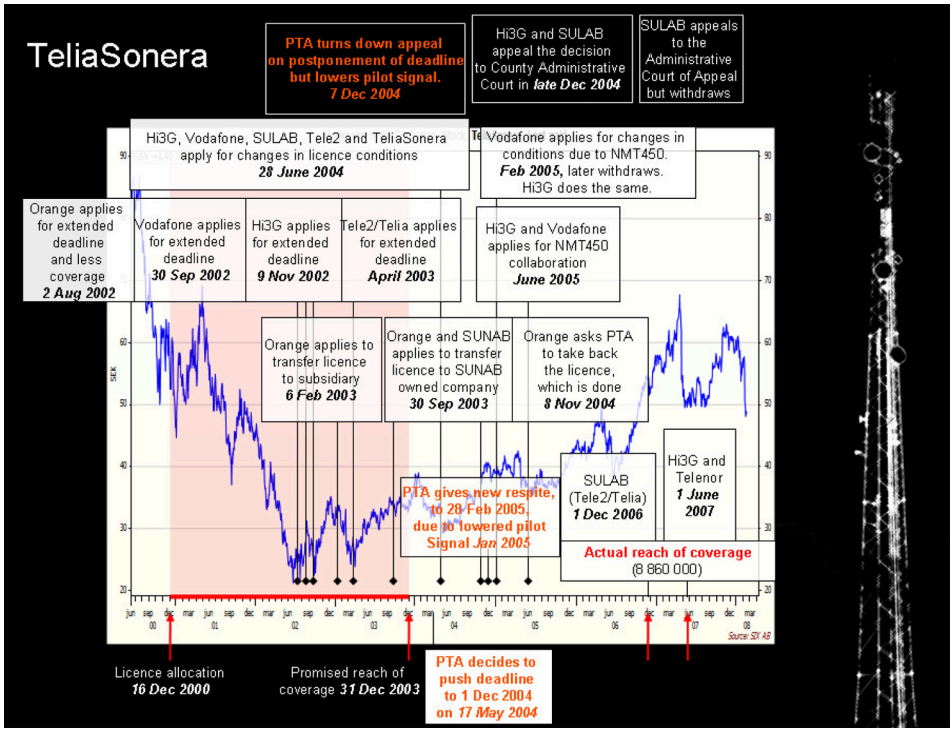
Such an analysis of the PTA/operator relation suggests a PTA handling of the operators' responsibilities in consensus with the operators, as two participants in a game teaming up in a way that the rules of the game do not intend them to. The period before the licence allocation, when the draft was prepared and the preconditions were decided upon, the times in the IT sector were extraordinarily good, the sector was booming and the optimism connected to information technology was strong (Larsson 2008). The stocks of key players in the 3G development such as Telia, Ericsson and Tele2 were peaking (pictures below). As a result of this, during the autumn of 1999 critical voices were heard regarding the infrastructure development running a risk of being delayed in Sweden, and was an expression for fear that Sweden would lose its world leading position in the telecom sector (PTA report June 2001, p 5). Behind the critique were Swedish telecom operators and producers of telecom equipment. The responsible Ministry called for the PTA to speed up the licence allocation process.[5] Finland had already allocated the licences, a fact that most likely stressed the Swedish critics, especially Ericsson (PTA report June 2001, p 5). It was the necessary changes of the Telecommunications Act that partly delayed the Swedish allocation, which were made in order to secure competition in the telecom market.



Upper left: The Ericsson stock charts for the times before, during and after the intended 3G infrastructure roll-out. Note the good times of the planning stages of the Swedish 3G development prior to the intended infrastructure roll-out (in pink/red), when Ericsson pushed for a faster licence allocation process.*Source: Six AB*
Upper right: The Tele2 stock charts for the times before, during and after the intended 3G infrastructure roll-out. The pattern is recognized. Tele2 made promises during optimistic times and the attempts to postpone the deadline started sometime in the middle of the "intended" roll-out. *Source: Six AB*

5 "Mångfald, valfrihet och lägre priser på mobiltelefonmarknaden", Press release issued by the Ministry of Enterprise, Energy and Communications (Näringsdepartementet) Dec 15, 1999.

Below: The TeliaSonera stock charts for the times before, during and after the intended 3G infrastructure roll-out compared to the operator actions and the PTA response see figure 4. *Source: The PTA, Six AB and Larsson 2008.*



When the infrastructure roll out, as a result of the promises made to receive licences, were to speed up in 2002, the IT bubble burst and the market went into decline, certainly affecting the investment interest of the operators facing problems. They faced harsher times and decided to try hard to postpone the deadlines for the reach of coverage according to the licence conditions. How the PTA reasoned is hard to tell but the important point here is that the PTA, by its lack of sanctions, participated in the game for the benefit of the operators.

Is it not a good thing that the PTA can be flexible enough to let the operators' roll out depends on reasonable investment strategies and fluctuations in the market? From a licence allocation as well as a legal security perspective it is problematic, to say the least. This is because a "yes" to this question means that the licence allocation would be nothing but a charade, and the promises made by the contestants would not be followed by a duty to fulfil these promises later. Such a system is neither transparent nor predictable and just. If what is stated in the licence conditions is not what will later be fulfilled, the conditions are not transparent. The transparency of the 3G licence allocation in Europe was prior to the allocation especially emphasized in the EU directive of 97/13/EC. Also, predictability is "one of the basic values in democracy and a state governed by law" (Peczenik 1995, p 89f.). Many legal theorists hold

the norm of "jurisdiction and the actions of public authorities in a democratic state should be predictable" (ibid, p 90) as the very essence of legal security. The licence conditions of the 3G development can also be judged in light of the most basic principle of civil law, described by the Latin phrase *pacta sunt servanda*, – agreements must be kept.

When the European Commission in a Communication to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions in June 2002 commented on the matter of the 3G roll out in Europe, it stressed the importance of a predictable environment in the sector and any modifications in the licence conditions should be "proportional, transparent and non-discriminatory" (Section 3.1 of COM(2002) 0301).

From an analytical point of view, there were three basic alternatives open to the PTA when handling the operator breach of fulfilling the licence conditions. One was the "the hard way" – imposing heavy sanctions on the operators in order to make them comply with the licence conditions. Another was "the honest way" – that the PTA would have confessed that the results of the so called beauty contest were not reasonable in light of the changed market conditions of 2001 and 2002, hence allowing changes in the conditions and risking to be sued by other applicants as well as being criticized for not sustaining a predictable environment, transparent and non-discriminatory handling. The PTA chose a third alternative, a middle path, the balancing act of not formally changing the licence conditions (which *formally* sustains the above said) and not sanctioning the operators for their breaches, but from several aspects *informally* leads to an application that is quite the opposite of what the Commission communicated. In fact, the PTA's handling of the operators is not *predictable* – the licence conditions have not been upheld. Not formally (when it comes to the pilot signal), but more importantly not actually, in the application. This means that the handling has not been *transparent*, in the sense that the formal documents did not describe the actual outcome, and *discriminatory* towards the other applicants as regards the lack of demanded realism in the promises made in order to get the licence.

The PTA's role in the governing of the Swedish telecom sector can be returned to here. For instance, it can be questioned that the PTA fulfilled the goal of "promotion of competition" in this case, if the governing was discriminatory. A comment in the preparatory work regarding chapter 7, section 4 is particularly interesting in the case of the PTA supervision of the operators' obligations under the licence.

> The circumstance that a party has not responded within the time frame the authority has given, does not hinder that the authority proceeds in its supervision. Neither do repeated or new and changed applications to the authority mean that the authority cannot proceed in its supervision, unless it within the time frame is clear that further supervisory action is unnecessary (Prop 2002/03:110, chapter 30, author's translation)

The PTA clearly had let the supervision responsibilities rest whenever an operator applied for a change in the conditions or appealed a decision. The preparatory work clearly states that the PTA would not have had to do so. So, again, why the soft treat-

ment, when the design of the development had emphasised the importance of speed and coverage, the reach of a "regional balance" and the importance of ensuring that Sweden remains a "leading IT nation" (Larsson 2008)?

The bigger picture applies and in the long run the results may have been the best in the given circumstances in an IT sector in decline. A bankrupt operator would not have been beneficial to anyone. But the lack of predictability in the actions of an important governmental agency is still a problem. In this case it meant that the applicants in the licence allocation process that could foresee the PTA's lack of sanctions most clearly benefited the most. Note the interesting comment from Europolitan (later Vodafone, now Telenor), one of the 3G licence winners, which, when reviewing the draft before the licence allocation process in 2000, asked for clear and apparent sanctions for the operator that does not reach the promised coverage in time, in order to prevent too high bids (PTA 13 March 2000). This shows that the operator knew that the design of the licence allocation could stimulate too high bids, and perhaps feared that other applicants would bid higher. Bearing in mind that Europolitan actually made the highest possible bid regarding coverage and time limit, just months later. This may have been a tactical manoeuvre or perhaps became a strategy the moment the company realized that no heavy sanctions would be clearly stated in the conditions, even though the company had asked for it. This operator later fulfilled the coverage conditions by June 1, 2007 instead of the promised December 31, 2003 (PTS fact sheet of June 1, 2007, PTS-F-2005:5, p 6).

The differences between how the 3G infrastructure development was designed and how it was rolled out can probably be explained by the radical transformation of the IT and telecom market in late 1999 and into the early years of the new millennium. Still the approach of the article has not been economics or market fluctuations but from a socio-legal and spatial planning point of view. The focus has not been the players of the market as much as it has been the public handling of different key aspects, included the actions of the government, the PTA and the operators.

The unsanctioned operators' lack of coverage according to what had been agreed upon illustrate a lack of transparency in the governmental steering of a billion dollar project, which shows the incrementalist approach where a short-term (daring rather than deliberating) perspective reigns where developments are made step-by-step. The question is to what extent not only the operators but also the PTA were, informally, comfortable to find ways out of the pressured time limits and formal statements of the year 2000. Formally, in any case, the PTA has to refer to legitimate delays. When focusing on the appeals and new operator applications, this can be seen as a method of not putting too much pressure on the operators and to make up for the mistakes made in the licence allocation process that became apparent a little too late, at the cost of predictability in the legal application.

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