Proactive Law – and the Importance of Data and Information Resources

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1   Introduction

This article is a documentation of my presentation at the Proactive Law Conference held in Stockholm, in June 2005.[1] The introduction to the conference stated:

> *Contracts, information resources and IT are valuable assets and a source of strategic advantage. They create and add value and have fundamental ion financial results. They need to be planned, secured and protected effectively.*
>   *The underlying theme of the conference is Proactive Law, which comprises a way of legal thinking and a set of skills, practices and procedures that help organizations to identify opportunities in time to take advantage of them - and to spot potential problems while preventive action is still possible. It is a future-oriented approach to law, based on a strong belief that legal knowledge is at its best when applied before things go wrong.*

The purpose of my presentation as well as this paper was to emphasize the importance of data- and information resources and the enormous amount of work we have ahead of us, before we can draw full benefit from Proactive Law approaches.

My hope is also that this paper raises some questions and debate on where we are today, especially in terms of the need for new technological improvements or fundamental paradigm shifts that lead us into a new phase of governing.

I would like to thank my friends that have contributed e-mails and thoughts during the process: Mats Vikstrøm CSC, Eskil Ullberg IKU AB, Tord Beding TC-Growth AB and Per Magnus Wicèn ROTE. This paper will also be published at the SIRNET and IQMNet[2] sites.

2   The Strategy of Proactive Law

Proactive Law is based on the notion of *"do the right things first"*. We should use computers to *understand* [3] the mass of laws, rules and regulations, associated stipulations and dependencies. Computers should also be used to *understand* my personal information that describes my needs and actions, and by combining the personal information with the current laws, be able to draw the best conclusions and provide me with recommendations, to *"do the right things first"*.

In a world where more and more functions will be handled by computers, Proactive Law will prove to be one of the best ways to enhance our quality of living. Proactive Law will introduce a new sense of justice among average citizens and build up a new trust in the rule of law.

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1   See further "www.juridicum.su.se/proactivelaw/".

2   SIRNET site, "*www.sirnet.info*", IQMNet site, "*www.iqmnet.org*".

3   To understand, means not a thinking machine, but a structured schema/program that is using predefined rules to process, compare, update, sort, categorize, add, subtract, copy, etc.

Is this possible to do? This paper will address the problem area, and the opportunities we are facing. Proactive Law as it is presented here can naturally be done in less or even more advanced versions. A probable strategic development and implementation of Proactive Law might start with the current situation of managing paper and the need to turn it into something compatible with computer language, in accordance with the following changes:

Current laws, rules and regulations need to be cleaned up, quality-assured, digitized, simplified, translated and made available so average citizens can understand and act in accordance with the desired *Legal Knowledge*. This includes changes, where we will go from managing paper/documents to computer-interpreted rules and information objects.

Information on citizens needs to be integrated, quality-assured and managed. This will lead to a better understanding of the citizen's current needs and activities, so authorities can support and aid with adapted services. This is a huge paradigm shift, which includes moving bits and pieces of data and information that is scattered around the government and integrating them into one comprehensive information resource.

Protecting citizens' rights to privacy is essential for Proactive Law to become a success story. Instead of having numerous government organizations responsible for bits and pieces of data and information, which is a nightmare to manage, we should assign the overall ownership of his/her information to the individual citizen. Local municipalities would then assist and help citizens manage the integrated and quality-assured citizen information (see #2 above).

Absolute identification of physical and legal individuals is a fundamental pre-requisite in order to know which authority or person needs to be connected to which individual. Ensuring the identification allows us to entrust our tools such as information technologies and communication networks. This includes changes, where we will go from identification of computers and other equipment to identification of people.

So, what can be achieved if we now have access to legal knowledge, citizen information and we can handle personal integrity and security problems and we have identification of individuals? Let's just browse through some future scenarios:

I am at my desk and through my computer I am connected to my friend Thomas. I don't know his current pager number, phone number (home, hotel, work, etc., fax number, e-mail address, post address or mobile phone number, but I know his name and perhaps his personal-ID. Thomas can travel the globe and can assign his ID to a multitude of gadgets. As soon as he borrows a cell phone, his ID will be assigned to that number. In this manner, Thomas *as a person* will always be reached. If he is not attached to anything, then I can leave voice, text or video messages, that will be activated as soon as he attaches his ID to any communication gadget.

I have received notification from my new employer in Denmark that I am employed, and welcomed to start work on Monday 0900. Proactive Law systems will automatically update my CV with this new information, and they will guide the taxation authorities to update my tax-record and the rules for my IRS-report, like rules for deductible travel between Sweden-Denmark. Updated information will also be transmitted to my employer. The Social Security Agency will update

its records and send information to Denmark that my Social Security will now be covered by the Danish Authorities. My Bank in Sweden is sending me a trusted e-mail, and asks if I would like to connect to my new employer, so salary can automatically be transferred.

I am writing a contract with an international supplier/contractor. During the process I am continually updated through the Proactive Law system on our corporate clauses and on international and national laws, rules and regulations, which will help me formulate the contract. The Proactive Law system guides me also through the maze of import rules, customs documentation, money transfer, accounting, etc.

I am a local chief for the Emergency Trauma Team, and I am guided by the Proactive Law system on how to receive reliable and trusted information on patients, their blood types, allergies, current medication or medical treatment, insurance coverage, language, next of kin and other information. Here the Proactive Law system will function as a security-portal, in order to abide by information security regulations to protect citizen's individual integrity.

I'm going to buy a new car, and the regulated "paperwork" is managed through the Proactive Law systems. The national car-register will automatically be updated, and if I am buying a vehicle that is restricted in some way, then the appropriate "forms" will be managed. I can be connected to the local car dealer for follow-up services, and bank connections are handled.

To conclude: Information resources grow in importance and influence all areas and require multi-disciplinary support. The legal community is challenged with the possibilities of a "new renaissance" by being the driving force by changing the focus from IT to information, and should express the need to migrate the current legacy data- and information resources that enable Proactive Law services to support our citizens. The legal community should also be an advocate for an International Infrastructure for secure and trusted identification.

Remember – data and information is power, for those who can find/access, understand and make use of it. The legal community should also be concerned about how these new "resources" are managed and used.

The quality of services and decisions are directly related to the quality of information.

3   The Meaning of Proactive Law

There is no doubt that the notion of proactive law opens up a vast area of potential research topics. However, this paper is limited to addressing the "application" of Proactive Law.

Proactive[4] is the controlling of a situation by causing something to happen rather than waiting to respond to it after it happens. *Law*: the collection of rules imposed by authority. *Proactive Law*: An authority uses the laws to assist situations to happen and to control them.

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4   Definition from "www.hyperdictionary.com".

Proactive Law[5] is a future-oriented approach to law, based on a strong belief that legal knowledge is at its best when applied before things go wrong.

Proactive Law[6] has its origins in preventive law. It is based on a strong belief that legal knowledge is at its best when applied before things go wrong. In addition to avoiding disputes, litigation and other hazards, proactive law seeks ways to use the law to create value, do what is right, and build a solid foundation for business and people to succeed. In the corporate arena, proactive law seeks to integrate preventive law with enterprise-wide quality and risk management. In this context, the emphasis is on the client, who has an active role in the process.

4   The Meaning of Data, Information and Legal Knowledge

Data[7] can be defined as:

In computing, data is information that has been translated into a form that is more convenient to move or process. Relative to today's computers and transmission media, data is information converted into binary digital form.

In telecommunications, data sometimes means digital-encoded information to distinguish it from analog-encoded information such as conventional telephone voice calls.

Generally, and in science, data is a gathered body of facts.

Information is stimuli that have meaning in some context for its receiver. When information is entered into and stored in a computer, it is generally referred to as data. After processing (such as formatting and printing), output data can again be perceived as information.

When information is packaged or used for understanding or doing something, it is known as *knowledge*.

I will use the term Legal Knowledge just to point out that certain data- and information resources arise from the legal community. Legal knowledge could be the content of laws, rules, regulations, guidelines, handbooks, articles, papers, applicable case-studies, court protocols, recommendations, analytical conclusions, investigations, reports, specifications, contracts or any type of document or piece of information that will help an average citizen to grasp and understand his current legal limitations (*negative:* what isn't allowed or *positive:* best way forward) and legal liabilities.

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[5]   Definition from the conference program.

[6]   Definition from "www.lexpert.com/en/links.htm".

[7]   Definition from "searchstorage.techtarget.com/glossary/0,294242,sid5,00.html".

5   The Legal Knowledge Problem

Proactive Law implies that an authority makes legal knowledge available, and citizens will access (*pull scenario*) and use that to understand how laws, rules or regulations will influence their activities and processes.

Proactive Law could also imply that an authority will automatically adjust and adapt its services to citizens (*push scenario*), so they will be helped, supported or ensured to abide by current laws, rules and regulations.

Regardless of a push or pull scenario, *the key to Proactive Law can be found in how well we can manage, understand and utilize data- and information resources.*

The use of computers will be very important for Proactive Law. Computers will be used to manage large volumes of information resources, to control and hide complexity for citizens and to provide easy-to-use computerized tools and to manage automatic services.

But, before we can use these new capabilities, our legacy needs to be migrated to become a trusted and quality-assured legal information resource. So, looking into the legal information of today, we quickly realize that there are some severe problems that must be dealt with.

5.1   Clean-up

Managing the enormous *complexity and volume*[8] of our legal knowledge is a gigantic undertaking. The amount of text, relations to and dependencies on other relevant information is incomprehensible for most humans.

Clean-up activities; eliminate redundant, inconsistent, outdated and non-applicable laws and consolidate them with other national and international laws. In some cases, these clean-up activities might lead to an increasing volume,

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[8]   Story from FOX News, Thursday, March 11, 2004 "www.foxnews.com/story/0,2933,1138
61, 00.html".

  "America has too many laws, and the laws we do have are tedious, overly complex and sometimes not only impossible to understand, but impossible to comply with. Our elected officials pass laws in fits of whimsy, responding to the latest scare headlines, demands from interest groups or data from polling firms.

  The federal tax code (search) today covers 17,000 pages and requires over 700 different forms. The IRS estimates Americans spend 5.1 billion hours annually merely preparing their taxes. The Tax Foundation estimates that those wasted hours drain some $194 billion annually from the U.S. economy. All of that comes before Joe Taxpayer forks over his first dime.

  The federal criminal code is just as bad. Thomas Jefferson wrote that the U.S. Constitution gave Congress the power to criminally punish "treason, counterfeiting the securities and current coin of the United States, piracies, and felonies committed on the high seas, and offences against the law of nations, and no other crimes whatsoever." Yet the federal criminal code today spans some 1,400 pages, and that's just the "pocket edition."

  The Federal Registry (search), which records all of the regulations the federal government imposes on businesses (all of which carry the force of law), now exceeds 75,000 pages. The Office of Management and Budget estimates that merely complying with these regulations — that is, paying lawyers to keep educated on them, interpret them and implement them — costs U.S. business another $500 to $600 billion per year."

when national laws, rules and regulations are replaced by, for example, European laws.

Another very important activity is to clean up and harmonize the understanding of terms, definitions, descriptions, liabilities, limitations, interpretations, prioritizations, variables and attributes. An important objective for harmonization efforts directs that our laws should be compatible across all government sectors. This will ensure the capability to link between different types of law, between topics and various subjects. The cleaning up must include up-keep and maintenance of relations, links, references, versions, footnotes, indexes, thesauri [alt. thesauruses], etc.

Clean-up is always part of an Information Quality approach, where the objective is to certify for all types of users that this legal information is a trusted and quality-assured resource.

5.2   Language

Another problem comes from how *legal knowledge is expressed*. The "legal language" of today isn't aimed at the masses; instead it has its own vocabulary, definitions and attributes, which causes a multitude of problems. One can even find translation services today that translate texts from legal to plain language. One effect of this is a dramatic reduction of text volume. The Plain Language Association International[9] refers to a 60% reduction rate when translating complex legislation, see reference/link in the footnote.

Simplify language and building rules;[10] proactive law will put more emphasis on the average citizen's active participation and as such we need to ensure that our current laws, rules and regulations are easy to understand.

Portions of legal texts that will be used for human interaction, such as explanatory paragraphs, choices, actions, guides, limitations and liabilities should be translated into a simplified language or even be represented through images, animations, interactive sequences, simulations, audio and video.

It's not only the human user that needs a translated text. Computers will require a translation from a legal text to a clear-cut rule that might include variable entities, sequences, triggers, restraints, choices and defined outcomes.

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[9]   Reference: "www.plainlanguagenetwork.org/Legal/lawdefn.html". "Plain language" is a language simplified to make it readily understandable by the average person. It is language stripped of unnecessary complexity, but not stripped of style. It is perhaps language at the lowest common denominator. It is reader-focused language. "Clarified or simplified language" on the other hand is "language that has been worked on to improve its understandability, but retains technical terms (terms of art), if necessary. It can rely on the assumption of commonly held knowledge of how the legal system or government operates in order to understand the language.

[10]   Comment from Professor Cecilia Magnusson-Sjöberg: "*Just to let you know, previous attempts to clarify legal information so as to become comprehendible by the general public as generally spoken failed. A major reason for this is that legal systems take advantage of a terminology intrinsically based on both vagueness and ambiguity*".

Rules might be combined in different ways and they could be linked to other data sources to form a vast network of interconnecting rules.

Common data and information sources; our computers will help us with spell-checking, translation, grammar and quality controls if we provide them with instructions on how to do these things. Some instructions will use dictionaries and lexical rules in order to understand grammar and languages.

Defining our terms and relations to synonyms or other attributes is important in order to have efficient tools. Most of our word-processors have these functions today. But, we need to define and build reference/metadata libraries that help us with the understanding of more complex terms, that perhaps need a model to be understood.

5.3   *No paper representation*

The third problem comes from how the legal information is *represented* today. We have restricted ourselves to the paper format. New approaches recommend "XML-tagging"[11] of electronic documents, which will make it easier to search, retrieve, archive, maintain and publish paper publications. Still, the information is represented as electronic papers, where we are concerned about how to recreate its style and layout (can the paper be represented on the screen?).

If we have ambitions, in accordance with a Proactive Law scenario, to provide citizens with an automated legal service, then we need to look beyond the paper document and focus on the content.

The task will be to find the appropriate logical parts within the documents that will help us understand and process the content, identifying legal rules, guidelines, definitions, interpretations, descriptions, evaluations, triggers, prerequisites, recommendations, limitations, liabilities, etc., and translating it into a computer interpretable language.

The paper itself and how the legal information is formatted on paper must not be a hindrance for citizens to access and use legal knowledge.
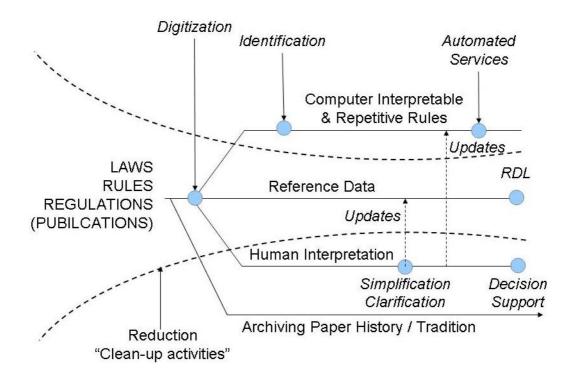
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[11] The *Extensible Markup Language (XML)* is a World Wide Web Consortium (W3C)-recommended general-purpose markup language for creating special-purpose markup languages. XML tagging is a way of adding <markups>, identifying the logical content and/or the structure of the document. XML-tags can, for example, identify <paragraph>, <table>, <picture>, <link>, etc. Tags can be used for search, retrieval, adaptations, management and for many other purposes. More can be read at "en.wikipedia.org/wiki/Xml".

Going from paper (where media, style and layout are important) to an information content that can be interpreted by computers (and humans), will be a hard nut to crack. The legal community has a long tradition over millennia, where papers have been the only way to capture, archive and use legal information. Modern computer-based tools (such as data bases) are form-, style- and layout-independent and many times more efficient to manage and maintain complexly structured data and information.

We should use computers to store/archive, compute, find, retrieve, present and transmit data and information. And, we should use humans for what they are good for, to produce, update and make valuable use of data and information. It's "overkill" to use smart people to manually handle documents, when computers can do it faster and continuously. Most working procedures that are rules-based and repetitive can be candidates for automatic computer services.

If the legal community requires paper to be used, then legal data and information will be assembled, formatted and printed out. If others would like to use a screen or let the text be spoken by a digital voice engine, then that could be done. The paper paradigm shift is about focusing on the information content instead of the presentation.

A road-map over some of the activities that need to be managed for migrating the Legal Knowledge.

To conclude: Legal knowledge is an essential ingredient for Proactive Law. The legal community needs to work diligently to change its perception on how legal information could and should be managed, represented and expressed.

Proactive Law will never come into fruition without the support of a dedicated legal community. Would these changes pose a threat to the legal community's interests? I don't believe so. When the initial fear and resistance to change have subsided, then law-makers, case officials, legal advisors, judges, practicing lawyers, legal scholars and others will see that concepts like Proactive Law are a necessary and inevitable component to improve the understanding and interaction with the average citizen. To understand each other is the essential part of the next section.

6   Understanding Citizens

In order to provide accurate and proactive services to citizens, authorities need to improve their understanding about them, their needs and activities. This is a "hot topic". There is a long record of public debate on the risks and threats, if government agencies, municipalities and organizations should build a "control function", where "big brother" knows more about us then we do ourselves. Most of us have read and been inspired by George Orwell's "1984".

Since "9/11", protection from and the war against terrorism has been one of the main reasons for increasing our understanding of and need to control

citizens. But there might be other reasons, like a growing trend to litigate[12] or a mutual mistrust between citizens and politicians.

In this climate of unrest, mistrust and violations of personal privacy, we need to find *new and empathic ways to understand citizens*, their needs and activities. Proactive law might be the long sought-after and trust-building function, supported by *non-bias computers*, logical and clear rules, always available and a dedication to give individual support and service.

Government authorities can use proactive law services to simplify and hide complexity from the average citizen. Proactive law services can also be used to provide individually adapted services. Society will then be perceived as easier to understand and a mutual trust can be re-built. An example of services could be automation of the income tax declaration, government grants, subsidies and benefits. Social insurance, child support, pensions and health care could be greatly improved. We tend to talk about a *citizen-centric society.*[13]
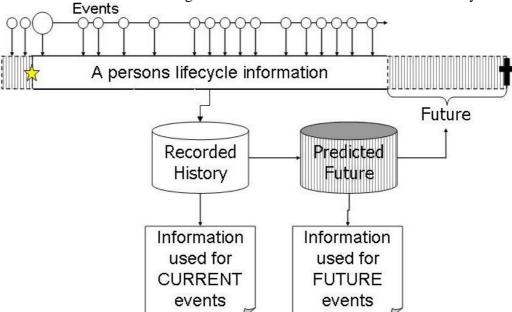
Citizen information needs to be captured, integrated and quality-assured. During the process data and information will be found that are incorrect, out-of-date, inconsistent or perhaps missing. Integrating citizen information will be a major cost-saver for our public sector. We would go from many 1000s of data sources[14] to management of just a few. That does NOT mean that we need to eliminate applications or information systems. The best analogy could be to compare with the *national car register*, where information is in one place, used and reused in 1000s of applications.

Another important reason for integrating citizen information is to give the person a chance to understand the width and depth of his/her information, and to let the person participate in the quality assurance. Citizens today don't have a clue

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12 A disturbing article by Dennis Prager about how a pervasive and justified fear of lawsuits has turned America into a hyper-managed society. What Europe achieved via socialism, America has achieved via litigation. Posted by Lawrence Auster in November and commented by Prager; "The Gang of Four -- trial lawyers, handpicked jurors, fortune-seeking litigants and like-minded judges -- have created an environment of mistrust that blankets our society." And further commented by Paul Henri, November 15, 2004. He forgot one very important member of this rogue's gallery...the press. Which makes it a Gang of Five. You see, without the sympathetic press to grind out stories of "injustice" fed to the public mainly through television, few would know about these cases. And without a public moved to pity by a constant barrage of bleeding heart stories, you couldn't get a sympathetic jury." Reference: "www.amnation.com/vfr/archives/002809.html".
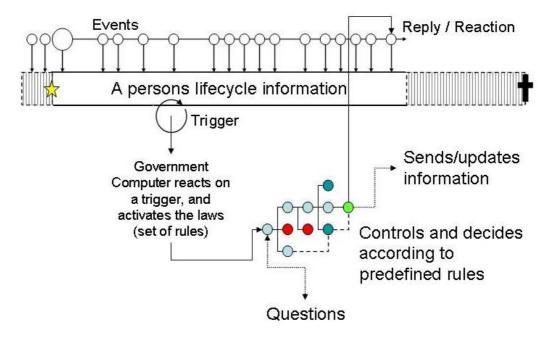
13 What's Citizen-Centric Society? It is a society where the government has the ability to provide adapted services to one individual, which also requires the government to understand the citizens' needs and activities and to correctly forecast the need to deliver services and to provide suitable resources.

14 Estimation, the Swedish government has 400/+ agencies + 300 municipalities and + 300/+ other organizations, where they manage 10 personal registers, equaling 10 000 personal registers. Cost to update: 1 MSEK per register.

about how much or what's registered about them in various information systems.

The collected information for a person's lifecycle. Information is collected from actual events and activities; it's integrated and quality-assured. The assembled information represents the historical record for this individual, and is used to provide current services. The historical record could also be used to simulate future needs and activities. Proactive law could be even MORE proactive if it's initially based on simulations.

This is a lifecycle view of a person, a student. She has just been admitted to the local university. The national authority that handles the Swedish financial aid for students has computers that automatically check her latest activities.

The computer reacts upon her admittance and starts checking through its rules-based legal knowledge, if she could be given any financial aid. The computer collects data and information from other systems, like the unemployed relief funds, social insurance, taxation authority, etc, and concludes that she will be approved for both a loan and aid.

She will receive a message asking her if she would like to have this support, and instructing her that loans must be paid back… She doesn't need to fill in any form, and she will comply with applicable laws, rules and regulations.

This automated service would naturally mean that the national authority for financial aid needs fewer employees (900 today) and could contribute with large saving, that could be put into improving the student's situation instead.

To conclude: Personal information can be found everywhere. It is not unusual to find a large number of databases and registers within the same organization. An address register handles similar entities and attributes as another educational system, or customer relationship system or a transport register, etc.

Integration of all bits and pieces of citizen information among the government organizations will be one of the toughest things to propose. Reactions will come from those stating "don't touch my information" to those who understand the potential of efficiency and cost-reductions. But many will say that this can't be done, due to the problem of integrity and security, which leads to the next chapter.

7   Protecting the Privacy of Citizen Information

"The right to one's personal character and to have one's inner sphere respected and not to be exposed to personal encroachment/ interference (personal integrity)"
(National Encyclopedia)

The Swedish Personal Data Act ("Personuppgiftslagen, PUL")[15] was meant to create some clarity and to inform the individual upon the intended use of personal data. The overall purpose of the underlying EU Data Protection Directive actually was to provide the means for the internal market to achieve a harmonized minimal level of data protection in the Member States. But, there are too many registers, too many authorities, too much information and failing interest to ask citizens for their consent. The legal requirements are usually handled as a standard paragraph on a webpage or in a brochure or a mass-mailed letter.

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[15] The Personal Data Act in principle states that personal data can only be registered and used if the actual person who is registered gives his/her consent, and if the usage is according to current legislation, or if it is necessary to close a contract with the registered person, or if it is needed to fulfill a legal obligation, or if it is to protect a major interest for the registered person, or if it is of national interest.

Once the citizen information is integrated across the government, it should be consolidated and quality assured. The *ownership*[16] *of the information should be* transferred to the citizen. What does this mean? Transferring the ownership to the citizen means in principle that the citizen is given the authority to decide upon who will have access to what information and for what purpose. We can say that the citizen holds the key to his/her personal information.

Is this really realistic? There will be a multitude of automatic (Proactive Law and other) services that need rapid access to citizen information. With the support of well-managed data- and information resources and identified users, there are possibilities to classify information in degrees of open, protected, confidential and secret/private, and to grant access to specific or groups of users.

This can in practice be done as a part of a service, when a citizen asks for a driver's license, and by doing så gives authority to government organizations to access selected information.

Another aspect of this transfer of authority is that the citizen will understand what the government has recorded (an open view), which will reduce the mistrust towards government authorities. Also, the citizen can participate in quality assurance of his/her personal information.
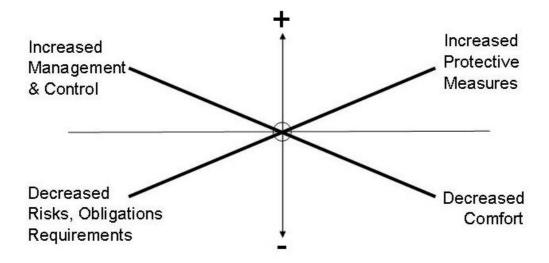
There will be data- and information that citizens should not see or control, in order to protect other citizens or national interests.

Can citizens manage this responsibility? It is unlikely that the average citizen will have the capability to manage large volumes of data- and information resources. Someone needs to support the citizen.

The local municipality could be responsible for managing (storage, archiving, quality assurance, indexing, sharing of common metadata and references) and securing all the data and information for a citizen. For this, the municipality should be given a financial contribution. The citizen will be given the access-key to his/her information.

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16 *Ownership* is the possession of something, and the socially supported power to exclusively control and use for one's own purposes. Information ownership is usually connected to the creation of information, but personal information is usually recorded as a consequence of a personal activity, hospital visit, school test, insurance claim, etc. The ownership is tied to the activity and the recordings, regardless which authority has done the recordings.

Tradeoff Model

Proactive Law will require that authorities have a certain control over citizens' data and information. A simple tradeoff model shows that increased control will cause higher levels of discomfort.

Reduced risks will reduce needed protective measures. Lowering protective measures will also cause reduced discomfort and the need to manage and control. In other words, our trust and confidence is tied to the level of discomfort we can endure.

So, where are we now? Well, we have migrated legal knowledge to computer-interpreted rules and we have made the individual citizen visible and understandable. Could we then match legal knowledge with citizens' needs and activities? Yes, and here is the path to success. But, before we can have a functional Proactive Law service, there is an essential ingredient missing.

8   Absolute Identification

A citizen-centric society and a Proactive Law service are *aimed at a unique person*, who needs to be identified. For a specific person, it could mean life or death if a health care service issued the wrong dosage of a drug that perhaps was meant for another person. Most services will be well-received if they can be trusted, and trust is built between people.

Our current situation is based on the OSI-model,[17] where computers are identified and connected into a gigantic network, Internet. Skilled and evil people can use an anonymous coverage and wreak havoc among innocent users.

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[17] The OSI, or Open System Interconnection, model defines a networking framework for implementing protocols in seven layers. Control is passed from one layer to the next, starting at the application layer in one station, proceeding to the bottom layer, over the channel to the next station and back up the hierarchy. The layers are physical (1), data, network, transport, session, presentation and application (7).

The flow of viruses, deceptions and frauds are possible because we allow users to be anonymous.

An absolute identification would force the virus maker to reveal his/her identity, which would counteract the purpose of sending the virus in the first place. As a user, I would like to give instructions to my e-mailing or communication system that I don't want to receive any anonymous transmissions – only those which have a positive and absolute identification.

Our government is struggling with this problem, trying to write legislation for viruses, infringement or other types of computer crimes. Legislation is today not more than nice and political statements, but extremely difficult to practically and efficiently implement, unless culprits are caught in the act of committing a crime. Unless we can demand an absolute identification, the technological means will always be in favor of the criminals.

In order for this to be operational, we need to develop our technologies so everyone could have a unique identification component that is hard to be stolen or counterfeited and would not be lost or forgotten by the smallest child or the most senile elderly person. The technological solution must provide a safe haven for our personal identities. I do encourage everyone that reads this to provide some ideas as to how this could be achieved.

Proven and absolute identities would lead to a lot of improvements:

Automatic proactive law services could be directed towards the correct individual, without any interference. Medical advice, tax declaration, pensions, insurance, applications and payments, could all be handled in a secure way.

Automatic directions of government issued grants, subsidiaries and support. If a citizen is eligible for government support, then it should be issued without applications or tedious procedures.

Automatic reminders to prepare a citizen for future activities. Age-related activities such as military enrolment and testing, military service, higher education, driver's license, returning books to the local library, renewing drug receipts, health care and dental check-ups, and much more.

Democratic interactions between government and citizens, where both sides can ask questions, provide views and insights, take part in detailed debates and manage electronic elections and show current polls and statistics.

The commercial aspects would be fantastic, where citizens would be able to trust electronic commerce.

Reduction of fraudulent computer crimes, electronic stalking of people, spam, electronic theft, viruses (trojans, worms, salamis, logic bombs), phising, violation of copyrights, distribution of forbidden information such as child-pornography, pranks, hacking, eavesdropping, data diddling, zapping, manipulation of data and information, data theft, phreaking, cracking, espionage, directed attacks, dumpster diving, wiretapping, denial of service, masquerading, social engineering, harassment, software piracy, traffic analysis, covert channels, trap doors, session hijacking, tunneling, IP spoofing, sniffing, scanning, and more.[18]

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18   Check "www.oreilly.com/catalog/crime/chapter/cri_02.html" for explanations.

Current legislation efforts will always be 45 steps behind technological developments. Not a single one of these criminals would like to reveal their identity, "Hi – I am Jim, here is my latest virus, which will devastate your computer". So, instead of trying to develop technological counter-measures, we should make it more difficult for them to communicate with their victims. We should be able to have a switch/command saying Anonymity ON/OFF.

To conclude: We have today an IT focus, where we identify machines (IP-number) and not people. Physical and legal persons can be anonymous and proof of identity isn't regulated. As a result we have severe problems with computer crimes and we can conclude that our personal integrity is often violated. The levels of trust are very low for our IT-systems and for all electronic services. We can also see that there are *severe difficulties in writing legislation that matches machines with people*.

We also have poor control over copyright material (a movie, music, image, idea, concept, document), and their value chains. No traceability of originator, owner (all or parts of) and user/s. All this leads to difficulties, in sharing of data and information and in building trust and maintaining information quality.

Proactive Law requires an absolute identification of physical and legal persons, and *introduces environments where anonymity is not allowed*. In such an environment is proof of identity clearly regulated? Computer criminals will have fewer opportunities to commit their crimes. Our personal integrity can be controlled and as a result will our levels of trust be much higher. It will be possible to write legislation for the digital society.

Every copyright protected material (a movie, music, images, idea, concepts and document) is tracked and traced. Its value is known, originator, owner/s and user/s are known. This will lead to new and interesting ways to exploit (create values from) data and information and with that new services, products and relations.

9   Proactive Law - Desired Outcome

Proactive Law is a future-oriented approach to law, based on a strong belief that legal knowledge is at its best when applied before things go wrong

So what will the outcome be through Proactive Law?

First of all, the citizen will be more visible. A change in focus from a government-centric society towards a citizen-centric society will have a fundamental impact on the role of government and the relation towards its citizens.

Proactive Law will dramatically increase the average citizen's ability to understand and comply with laws, rules and regulations. This could lead to citizens showing more interest in participating in the political process of optimizing, changing and proposing new legislation. Citizens who are involved in the political process and who understand the government will strengthen democracy and the foundation of government.

Proactive Law will increase government authorities' understanding of citizens' needs and activities, so the right public service and support can be provided at the right time.

Authorities will have better tools to predict future events, needs and activities, and can match that with adjusting the size of public support functions.

In the best of worlds Proactive Law would lay the foundation of trust for the government of law, where citizens' freedoms and rights are protected regardless of age, sex, race or belief.

In the worst of worlds Proactive Law would give authorities the final tool to form the ultimate Police State, where citizens are regarded as no more than controlled "production units".