Applying ICTs in Juridical Decision Making by Government Agencies

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INTRODUCTION

Electronic government is developing throughout Europe. Increasingly, central, regional, and local governments use ICT applications to perform their tasks. In the 1970s and 1980s, computers were mainly used to perform administrative tasks (including word processing). In the 1990s, *juridical expert systems* were introduced within government organizations: software programs which can solve juridical problems, either without any human interference or with limited human interference, by means of a reasoning mechanism and a "knowledge database" (Groothuis, 2004). Furthermore, government agencies started to use new ICT applications such as the Internet and e-mail to communicate electronically with citizens.

This article examines the juridical aspects of automatic decision making and electronic communication by government agencies in The Netherlands and addresses the following questions:

1. What is the legal framework for automatic decision-making by government agencies in The Netherlands?
2. What is the juridical quality of decisions made by expert systems in practice?
3. What is the legal framework for electronic communication between government agencies and citizens in The Netherlands?
4. To what extent does *electronic government* exist in The Netherlands and what are its prospects for the period 2005-2007?

AUTOMATIC DECISION MAKING BY GOVERNMENT AGENCIES

Increasingly, government organisations in The Netherlands use expert systems to make juridical decisions in individual cases under the Dutch General Administrative Law Act (*Algemene wet bestuursrecht*). Examples of juridical decisions that are made by expert systems are tax decisions, decisions under the Traffic Law Act (traffic fines), decisions under the General Maintenance Act (maintenance grants), and decisions under the Housing Assistance Act (Bovens, Groothuis, & Van den Hoogen, 2003).

There are two categories of juridical expert systems. Expert systems in the first category support the process of juridical decision making by a civil servant. The decision is taken in "cooperation" between the computer and the civil servant. Expert systems in the second category draft juridical decisions without any human interference. In these cases the decision making process is fully automatic.

The Legal Framework

To what extent and under which conditions is automatic decision making by government agencies legal? Under Dutch administrative law, there are no specific rules for automatic decision making.[1] Therefore, government agencies are entitled to use expert systems, or other ICT applications, in their decision-making processes if they wish to do so. This does not mean, however, that the use of ICT is not bound by any rules. When government agencies make decisions, the general rules of Dutch administrative law apply. Most of these rules can be found in the *General Administrative Law Act*. Among them are several *general principles of proper administration*: rules which administrative bodies should observe in all their acts. The *justification principle*, for example, holds that an administrative body should give grounds for its decision, and that these grounds must be mentioned in the decision itself (article 3:46 and 3:47 of the General Administrative Law Act). If a decision is made by an expert system (or another ICT application),

the *justification principle* requires that the reasoning (or logic) behind the automatic decision be explained. This means that the working of the ICT tool has to be transparent.

Besides the *general principles of proper administration* a second set of principles has been developed in Dutch jurisprudence: *general principles of proper use of ICT*. According to some scholars (Bovens, 1999; Franken, 1993) these principles—accessibility, confidentiality, integrity, authenticity, flexibility, and transparency—should be respected when government organizations use ICT. If, for example, a government agency uses an expert system in its decision-making process for residents permits, this system should be accessible for applicants and other citizens (principle of accessibility), function correctly (principle of integrity), and its working should be transparent (principle of transparency).

Finally, the Dutch Privacy Act (*Wet bescherming persoonsgegevens*) contains a specific provision on automatic decision making (article 42). This provision, which applies equally to government and nongovernment organisations and which forms the implementation of an EU directive[2], holds in its first section that:

every person has the right not to be subject to a decision which produces legal affects concerning him or significantly affects him and which is not based on automatic processing of data intended to evaluate certain personal affects relating to him.

The second section of this provision gives an exception to this main rule. It states that a person can be subject to a decision as referred to in the first section if—in short—suitable measures are taken to safeguard his legitimate interests, such as allowing him to put his point of view. This provision implies that automatic decision making by government agencies is allowed under the condition that citizens who have a legitimate interest in the decision are given the opportunity to present their views (e.g., in a public hearing).

Quality of Electronic Decision Making: Two Case Studies

What is the juridical quality of automatic decision making by government agencies in daily practice? In the period 1999 to 2002 I performed empirical research on the quality of automatic decision making by government agencies.[3] In two case studies I examined whether automatic decision making meets the requirements of the applicable statutes and rules of unwritten law. The first case study examined the daily use of an expert system in

the field of housing assistance in the Dutch Ministry of Planning. The second case study investigated the daily use of an expert system in the field of general assistance in one Dutch municipality.

In each case study, three steps were taken. First, a *checklist* was developed. Next, this checklist was *applied* to a selection of individual decisions. Third, the *results* of this application were categorised and interpreted.

Each of these individual decisions involved intensive file research. For each of the selected decisions the pertinent file was obtained and studied with respect to the criteria in the checklist. It was determined whether each decision fulfilled all of the requirements in the checklist. Below, the results of the two case studies are summarised.

Case Study I: An Expert System for Housing Assistance

The first case study examines the daily use of an expert system in the field of housing assistance: *IHS*. This expert system was developed by the Dutch Ministry of Planning in the late 1980s and has "produced" millions of decisions since then. The system is run on a "mainframe", which is connected to a number of personal computers.

Seventy-five percent of all application forms for housing assistance are processed fully automatically by *IHS*: in these cases the decision is made without any interaction by a human being. In the remaining 25% of the cases, a civil servant is involved in some part of the decision-making process. In those cases the decision is made by "cooperation" between the expert system and the civil servant. An *interface* enables communication between the expert system and the civil servant. Via the interface the expert system asks the civil servant to enter specific data. After each question the expert system presents an intermediate conclusion on the computer screen.

In all cases, the reasoning mechanism of *IHS* formulates a decision in the individual case. No human being is involved in the formulation of the text. Each decision is automatically printed out and put into an envelope. No human being reads the decisions before they are sent.

To make correct decisions under the Housing Assistance Act, the Minister of Planning in The Netherlands needs to follow two sets of rules. The first set is the rules from the Housing Assistance Act. The second set consists of the general rules of administrative law, most of which can be found in the General Administrative Law Act. Among these are several *general principles of proper administration*: rules which administrative bod-

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