

THE DUTCH DNA-LAW AND DNA-DATABASE

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The first DNA-law was introduced in the Netherlands in 1994. Since then this law has been adapted twice on 1 November 2001 and 16 December 2002. These adaptations have had major consequences for the Netherlands Forensic Institute, which does almost all the DNA-testing in the Netherlands and also is responsible for the management of the Dutch DNA-database, which is operated by CODIS software since 1 January 2001.

Several aspects of the management of the Dutch DNA-database will be discussed in this presentation:

- The administrative consequences of the Dutch DNA-law
- The composition and growth rate of the DNA-database
(See graph at http://www.dnasporen.nl/content/thema_detail.asp?id=9)
- The results of a joint effort of the NFI, the Dutch Police and the Dutch prosecution to apply a highly standardized way of DNA-testing to high volume crime (burglaries, car thefts, etc.)
- The development of a realistic way of counting continuously growing clusters of stain-to-stain-matches
- The reporting of national results to regional police forces and prosecutors

The main legal rules with consequences for the management of the Dutch DNA-database are:

- For every DNA-test (and associated DNA-database-uptake) requested by the police, authorization is needed of a prosecutor or an investigative judge who has to consider if the test is expected to contribute to the resolution of the case which is investigated.
 - Suspects can be legally (and physically if necessary) forced to undergo DNA-testing if they are suspected of a crime for which presumptive imprisonment is allowed (mainly crimes for which the law allows a maximum imprisonment of 4 years or more)
 - DNA-profiles of suspects, crime-scene-stains and dead victims are added to the Dutch DNA-database and compared to all DNA-profiles already present.
 - DNA-profiles of suspects only remain in the DNA-database if they are convicted; else they have to be removed.
 - DNA-profiles of crime-scene-stains have to be removed from the DNA-database when the corresponding person has been convicted for the crime(s) associated with the stain(s)
 - DNA-profiles are stored in the DNA-database for variable time-periods:
 - + Dead victims: 18 years
 - + Crime-scene-stains: 18 years (or until the conviction of the corresponding person)
 - + Persons convicted for crimes for which the law allows 4-6 years imprisonment: 20 years
 - + Persons convicted for crimes for which the law allows more than 6 years imprisonment: 30 yearsUpon a subsequent conviction, the storage time may have to be adjusted.
The cell-material used to produce the DNA-product is stored as long as the DNA-profile itself to enable later retyping if legally necessary or if a better typing technology becomes available.
 - Before a suspect is subjected to a DNA-test, the police have to check if the person involved is already present in the DNA-database. If so, no new DNA-test is necessary.
- To deal with all the abovementioned legal requirements a personal information program had to be set up for persons taken up into the DNA-database to monitor their legal status (suspect, appeal, convicted) and the storage time of their DNA-profiles after conviction. Names (and birth dates and places) of persons taken up into and removed from the DNA-database are automatically sent to a central, national register which can be consulted by the police and by the judiciary to find out if a persons DNA-profile is already present in the DNA-database. The program also generates "reminders" for the prosecution if after a predetermined time period no information has been received about the progress in the legal status of persons that have been taken up as a suspect into the DNA-database.

- Because of the present restrictions on the DNA-testing of suspects (the DNA-test has to contribute to the resolution of the case which is investigated) much more DNA-profiles of crime-scene-stains are taken up into the DNA-database than DNA-profiles of persons. A new law, which will allow the DNA-testing of all persons convicted for crimes for which the law allows a maximum imprisonment of 4 years or more is presently being discussed in Dutch parliament. This will ultimately lead to an inversion in the ratio between DNA-profiles from crime-scene-stains and persons.
- Many stain-to-stain matches are found when DNA-profiles of crime-scene-stains from burglaries are taken up into the DNA-database. Series of up to 17 burglaries could be attributed to (unknown) persons because equal DNA-profiles were found at different crime-scenes. Different types of geographical patterns could be detected and 'teamwork' has become evident from the fact that more or mixed DNA-profiles were found at crime scenes. 30-40% of all crime-scene-stain-DNA-profiles from burglaries cause one or more matches when taken up into the DNA-database.
- In a growing cluster of equal DNA-profiles from different crime scenes, any newly added crime scene causes a number of new matches, one more than the previous time that a new crime scene was added to that cluster. A cluster of X crime scenes has caused $(X^2-X)/2$ matches during its growth. For a cluster of 12 crime scenes this means 66 matches. To put the number of reported matches in a realistic perspective also the number of crime scenes contributing to those matches should be reported as well as their organization in clusters and the links made between clusters via mixed or multiple DNA-profiles found at a crime scene.
- Relevant details of all crime scenes in a cluster are reported back to each police- and prosecution-region that has contributed crime scenes to a cluster each time that a new profile is added to a cluster. In this way investigational activities can be coordinated.

Two new laws are presently being discussed in Dutch Parliament:

- A law, which will allow DNA-testing of persons, convicted for a crime for which presumptive imprisonment is allowed (mainly crimes for which the law allows a maximum imprisonment of 4 years or more).
- A law that will allow the testing for visible physical characteristics in DNA from crime scene stains if no suspect can be found by other means.