

SIS Research

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-
- This document explores the *technical* details behind the Schengen Information System.
 - Legal, political, and even human rights issues are not in the scope of the document.
 - Where possible references are listed. Not surprisingly, there is contradictory information about SIS on the 'net.
 - As of this current version, there is still a wealth of info that hasn't been integrated.
 - The document is a starting point for exploring the different systems, groups, and individuals involved.
 - Please distribute widely. Act as if you have the only copy on Earth.
 - Extensive quotes have been used from websites since they may go 404.

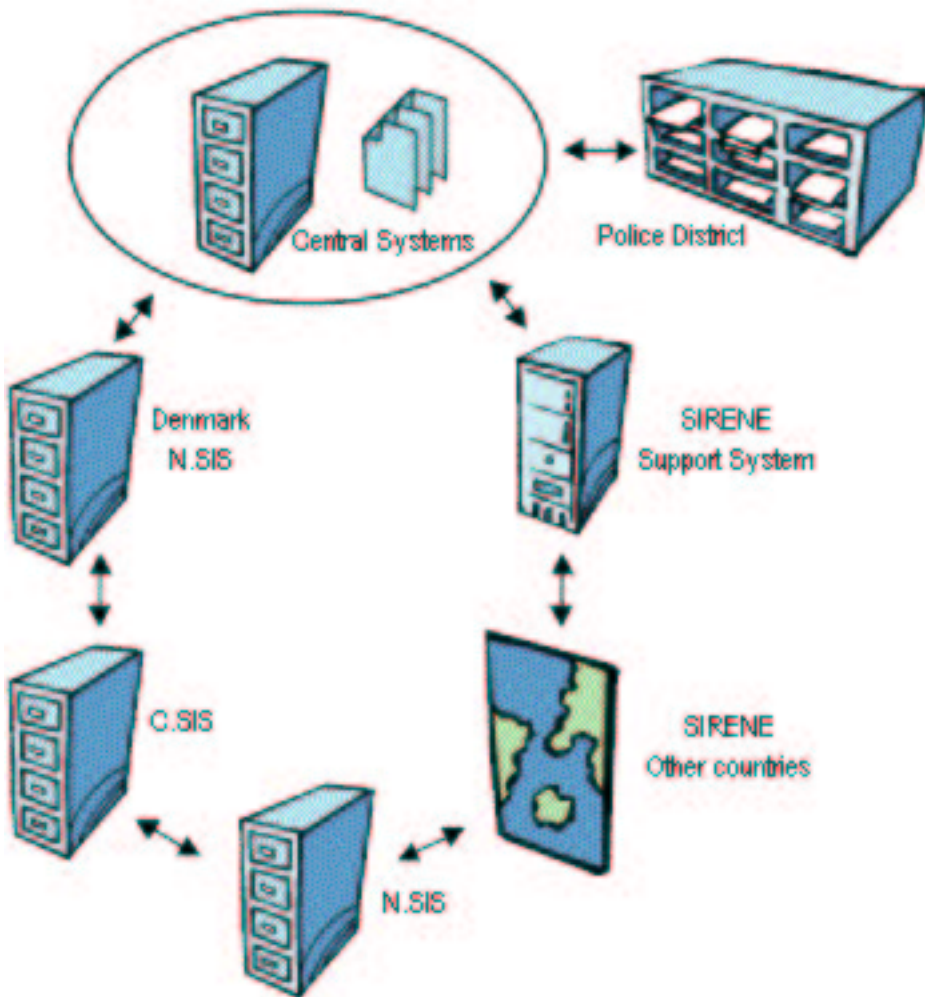
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1 Overall Design



A representation of Denmark's implementation

1.1 SIS

The European Union's website describes Schengen:

At the heart of the Schengen mechanism, an automatic network was set up,

after many technical difficulties had been overcome, to allow all police stations and consular agents from Schengen group Member States to access data on specific individuals, or vehicles and objects which are lost or stolen.

Member States supply the network through national networks (N-SIS) which are connected to a central system (C-SIS), and this is supplemented by a network known as SIRENE (Supplementary Information Request at the National Entry), made up of representatives from the national and local police, customs and the judiciary.[14]

1.2 System Usage

“The system can be consulted from over 50,000 computer terminals, by police officers as well as by immigration officials and diplomatic staff responsible for issuing visas”.[8] This figure appears to be from the year 2000.

“The principle of the system is that designated competent authorities in each State can make an entry called an ‘alert’ into their national system (N.SIS). This is transmitted to the central database (C.SIS) in Strasbourg which distributes it to all the other national databases. Where a police officer or border guard runs a check and realises that a person or object is entered in the system (this is known as a ‘hit’ in Schengen jargon), he must take the appropriate action, whether this is to deny the alien entry, to confiscate the stolen passport or vehicle, or to make the necessary arrest.”[8]

The SIS system is broken down into two main parts:

- C.SIS – Central Schengen Information System (located in Strasbourg, France)
- N.SIS – National Schengen Information System (located in each member State)

Historically each country has had their own databases for border control information. The technical challenge for the SIS developers has been to integrate their legacy systems into the larger SIS system. Some countries have taken the approach to have two complete, distinct systems (for example, Austria and the Nordic States). They separate their legacy national system and the N.SIS system. Another challenge for system developers has been to integrate their N.SIS system with their respective national police databases.

“All information broadcast from other countries’ Police Forces is evaluated at the SIRENE office before being accepted as a Schengen enquiry in Denmark. Similarly, any request for international enquiry is checked for legality at the SIRENE office before broadcast to other Schengen countries, through the SIS. To ensure correct consideration of the enquiries, information about fingerprints will be exchanged between the Danish SIRENE office and the SIRENE offices in other Schengen countries on pre-defined Outlook forms.”[4]

1.3 SISNET

Schengen Information System Network. In 1999 the Member States decided not to extend the contract for the SIRENE network which ends on 23 August 2001. It will be replaced by a new communication system called SISNET which will eventually become a "European Information System" also containing data on immigration. The Deputy Secretary-General of the Council is authorised by Decision of 17 December 1999 to conclude and administer contracts for the installation and functioning of SISNET [Official Journal L 337, 30.12.1999][14]

1.4 SIRENE

Supplementary Information REquest at National Entry. "In 1999 the Member States decided not to extend the contract for the SIRENE network which ends on 23 August 2001. It will be replaced by a new communication system called SISNET which will eventually become a "European Information System" also containing data on immigration. The Deputy Secretary-General of the Council is authorised by Decision of 17 December 1999 to conclude and administer contracts for the installation and functioning of SISNET [Official Journal L 337, 30.12.1999]".[14] So SIRENE uses IBM's MQSeries messaging, but the new SISNET will run on IP. It's a bit unclear to everyone involved what exactly SIRENE is as distinct from SIS itself. SIS seems to refer to the much larger system, whereas SIRENE is the computer/network/database implementation. To get into C.SIS or N.SIS, information must go into SIRENE first.

1.4.1 SIRPIT messages (SIRene PICTURE Transfer)

1.5 Working Parties and Committees

Groups that are involved with SIS.

1.5.1 SIS Working Party

"The Working Party has a controlling function for the two Council Working Parties SIS-TECH and SIRENE. The group also handles budget matters in the running of the Schengen information system (SIS)." The Director is Jonas Hult.[6]

1.5.2 SIS-TECH Working Party

"The Working Party deals with technical matters concerning the Schengen Information System (SIS).... The questions concern the purely operative drift of central SIS as well as short- and long-term projects such as the development of a communications network." Headed by Jan Segerberg, National Police Board.[6]

Meetings

SIS-TECH Working Group (EU/Iceland and Norway Mixed Committee)

Date: 03/01/2001 Policy area: Justice, home affairs and civil protection News item:

Working group agendas

1. Adoption of the agenda
2. Report of the Presidency
3. SISNET
 - a Status report
 - b Implementation plan
 - c C.SIS report on IP preparations
 - d Report on national preparations for IP
4. Evolution of the SIS
 - a Stage II-a
 - b Stage II-b
 - c C.SIS simulators
5. SIS II
 - a New technical platform for the SIS 5001/01 SIS-TECH 1 COMIX 1
 - b General evaluation of functionalities
6. Report of the C.SIS exploitation team
 - a Report on the migration and integration
 - b Database comparison after migration/integration
7. Report of the MU a RFC 078
8. Escalation procedures
9. Implementation of new features
 - a Introduction of the euro into SIS
 - b Misused identity
10. Other business
 - a Data quality survey
 - b MXMS contracts
11. Confirmation by the Working Party on SIS-Technology of the decisions prepared in the Mixed Committee

Contact information: DATE : 4 and 5 January 2001

TIME : 10.00h

VENUE : Council Secretariat Justus Lipsius Building 1048 BRUSSELS, rue de la Loi 175

1.5.3 SIRENE Working Party

“The Working Party deals with matters concerning the Schengen Information System (SIS) and the practical work of the national SIRENE offices. The group deals with the practical and operative aspects of the technology used for information exchange between the Member States of the Schengen Cooperation”. Headed by Detective Superintendent Sören Clerton.[6]

1.5.4 Working Party on Frontiers

“The Working Party deals with practical issues concerning frontier controls within the Schengen Cooperation. This mainly concerns working practices, training and the exchange of information in cooperation between Customs authorities and the police, the Coastguard and the Migration Board”. Headed by District Police Commissioner Knut Dreyer.[6]

1.5.5 Working Party on Data Protection

“The Working Party deals with matters concerning data protection and processing of personal information. A further question dealt with by the Working Party is the coordination of the views of the Member States concerning data protection issues”. Headed by Senior Advisor Sören Oman.

1.5.6 Working Party on Schengen Evaluation

1.5.7 Joint Supervisory Authority (JSA)

Appears to be outside the main Schengen group, but issues reports on it.[15]

1.5.8 C.SIS Exploitation Team

This group actually works for the C.SIS, not against it. One document refers to their training in KryptoGuard. Do they need some volunteers?

1.6 Security

1.6.1 Encryption

One system used by SIS was developed by “German federal office for information technology security 1 and Bosch Telekom.”[3] According to the JSA report dated January 2002, the encryption keys used in the SIS system have not been changed since the system started.[3]

1.6.2 Advice from the Joint Supervisory Authority to member States about security issues:[2]

1. Ensure the highest possible level of physical security by updating the methods used. Where shortcomings have been detected, the countries in question should make the necessary changes as soon as possible and inform the national supervisory authority accordingly;
2. Connections between the SIRENE and N.SIS should be encrypted and this encryption should be subject to controls by members of the supervisory authorities;

3. a) Install a tracing system for all operations involving the N.SIS and SIRENE databases (number of searches, time, type of data consulted etc.); b) Regularly use the tracing system to detect any abnormalities, in particular regarding the number of searches;
4. Limit and check access to the manual archives;
5. Encrypt the information contained on computer file;
6. a) Step up security measures aimed at ensuring that operators can only have access to the data they are authorized to consult, in particular by regularly checking access authorizations and changing passwords; b) Carry out regular checks on grounds for searches in the SIS;
7. Appoint somebody in charge of security and determine common security rules to be complied with by staff of the different SIRENE Bureaux;
8. Organize a system for dealing with printed information to limit the possibility of printing information from the SIRENE databases and the SIS alerts directly from the screen;
9. Promote the organization of training sessions on data protection for SIRENE bureaux users;
10. Recommend that the N.SIS and the SIRENE bureaux draft security reports on a regular basis, for instance annually.

2 C.SIS

2.1 Past

The original system may have been developed by Siemens, then Bull.

2.2 Present

C.SIS is the Central system that communicates with N.SIS in each member state. C.SIS is physically located in Strasbourg, France.

2.3 Future

2.3.1 C.SIS II

Some info from <http://europa.eu.int/scadplus/leg/en/lvb/l33020.htm>

At present the Schengen Information System operates in 13 Member States and two non-member States (Norway and Iceland). However, the system was not designed, and therefore lacks the capacity, to operate in as many Member States as there will be in the Union after enlargement. It is therefore necessary to develop a new second generation Schengen Information System. The two acts provide for the costs relating to the development of SIS II to be met by the general budget of the European Union, conforming to the Council conclusion of 29 May 2001.[14]

SIS II will be more powerful, have longer data retention, and include more features (i.e. multimedia). It looks like it will be IP based.

SIS-II, the “new & improved SIS” will contain “photos, fingerprints and if necessary even DNA profiles will be included in the SIS personal records”.[16]

3 N.SIS

3.1 Austria

- signed in 1995

3.2 Belgium

- signed in 1985, 1990

3.3 Denmark

- signed in 1996
- “The national database is connected to the Danish Police Forces’ central systems and the SIRENE support system via formatted messages. The messages are communicated via MQSeries”.^[4]
- The system went into operation in March 2001.^[4]

3.4 Finland

- signed in 1996
- competent Schengen authorities in Finland are the Police, the Frontier Guard, the Customs, the Directorate of Immigration, the Ministry of Foreign Affairs, a Finnish Diplomatic Mission, a Consular Mission, and other Finnish Missions if the Ministry of Foreign Affairs has authorised an appointed Finnish national working in that Mission to issue visas and residence permits”.^[10]

3.5 France

- signed in 1985, 1990

3.6 Germany

- signed in 1985, 1990
- National system called INPOL.

3.7 Greece

- signed in 1992

3.8 Iceland

- signed in 1996

3.9 Ireland

- is about to participate in the SIS only on police, but not immigration, aspects

3.10 Italy

- signed in 1990

3.11 Luxembourg

- signed in 1985, 1990

3.12 Netherlands

- signed in 1985, 1990

3.13 Norway

- signed in 1996

3.14 Portugal

- signed in 1991
- Supervisory Authority (?): <http://www.cnpd.pt/>

3.15 Spain

- signed in 1991

3.16 Sweden

- signed in 1996

3.17 Switzerland

- in early(?) process of joining

3.18 United Kingdom

- is about to participate in the SIS only on police, but not immigration, aspects

4 Companies Involved

4.1 Atos

- <http://www.atosorigin.com/>
- Supposedly has an office in Strasbourg.
- As prime contractor, Atos is in charge of designing and managing the project in partnership with IBM and CSC.[11]
- French website: <http://www.fr.atosorigin.com/>

4.2 Bull

French. Supposedly has an office in Strasbourg.

4.3 Computer Sciences Corporation

- <http://www.csc.com>
- A paper document circulating says they are involved.
- A press release by Atos says CSC is involved in SIS[11]
- CSC's website has no info about Schengen
- Some random site on the net had this info: 194.117.101.209 - 194.117.101.209 (SAP-COMP-US) Computer Sciences Corporation; US
- Honeycutt, Van is CEO according to random website. Same website says he's a member of Bilderberg.

4.4 France Telecom

4.5 IBM

- IBM has been awarded many of the C.SIS and N.SIS contracts (\$9 million for nordic contract[1])

4.5.1 MQSeries

C.SIS and N.SIS use IBM MQSeries software for transmission of data between the system. It can be thought of as an alternative to a system like SMS messaging. On IBM's website you can download developer versions of MQSeries. It appears to be mostly in Java (?). See: <http://www-3.ibm.com/software/ts/mqseries/>

MQSeries has recently been renamed (remarketed) and is now labelled as part of IBM's Websphere.

Versions

Around May of 2002, mqe126.zip was available at <ftp://207.25.253.61>. As of July 24, 2002 it is no longer available there, but via IBM's website you can download the file MQe127.zip.

Certification

IBM has a few different certification programs for MQSeries. (e.g. GC33-0805).

<http://elink.ibm.com/pbl/pbl>

Discussion Board

IBM has the following news groups and news servers available:

- <news://news.software.ibm.com/ibm.software.websphere.everyplace>
- <news://news.software.ibm.com/ibm.software.websphere.mq>
- <news://news.software.ibm.com/ibm.software.websphere.mq.administration>
- <news://news.software.ibm.com/ibm.software.websphere.mq.beta>
- <news://news.software.ibm.com/ibm.software.websphere.mq.everyplace>
- <news://news.software.ibm.com/ibm.software.websphere.mq.integrator>
- <news://news.software.ibm.com/ibm.software.websphere.mq.programming>
- <news://news.software.ibm.com/ibm.software.websphere.mq.workflow>
- <news://news.software.ibm.com/ibm.software.websphere.site-analyzer>

4.5.2 SIRENE

For details of data stored in SIS consult the supplementary data system SIRENE. SIRENE messages communicate via MQSeries.

4.5.3 Locations

- Has an IBM Learning Services Inquiry Center in Strasbourg, France. Telephone: 33(0)3.88.37.43.18

4.6 Sema Group plc

UK. Supposedly has an office in Strasbourg.

4.7 Siemens

Supposedly has an office in Strasbourg.

4.8 Utimaco Safeware AG

On September 20, 1999 Utimaco Safeware purchased the company KryptoKom GmbH. KryptoKom is the manufacturer of the encryption devices used in SIS.[9]

4.9 Systematic Software Engineering

URL: <http://www.systematic.dk>

The contract for the development of the SIRENE support system was won by a consortium consisting of Mæsk Data and Systematic. Project Manager: Jeppe Buk jeb@systematic.dk

This company does a lot of defence software (command and control) and generally gets lots of government contracts.

5 Motherfuckers

The humans behind the system.

5.1 Individuals

5.1.1 Ahlabo, Leif

Regional Chief of Police in Sweden. Sweden took lead role in the development of the Nordic N.SIS.[1]

5.1.2 Buk, Jeppe

Email: jeb@systematic.dk

Project manager at Systematic Software Engineering in Denmark, which provides SIRENE support.

5.1.3 Buttarelli, Giovanni

Chairman, Schengen Joint Supervisory Authority (JSA).

5.1.4 Clerto, Sören

Detective Superintendent and head of SIRENE Working Party.[6]

5.1.5 Dreyer, Knut

Heads Working Party on Frontiers. District Police Commissioner.[6]

5.1.6 Hult, Jonas

Director, Special Expert. Heads SIS Working Party.[6]

5.1.7 Segerberg, Jan



IT Project Manager of Swedish Schengen Project and Chairman of the Steering Committee for the Nordic N.SIS project.[1] Also lists as on the “National Police Board” and heads SIS-TECH Working Party.[6]

In February 14th-15th, 2002 Segerberg was at a Cicero Foundation (<http://www.cicerofoundation.org>) and gave a presentation entitled: *SIS II: How Can the Schengen Information System Be Improved?* At the conference they referred to him as from “European Commission, Brussels”.

There is a brief non-technical interview with Segerberg at:

<http://www.eu2001.se/static/eng/docs/lops010103.asp>.

There is a company named PEAB (www.peab.com) with a man named Jan Segerberg on their Board of Directors. This is *not* the same person. The PEAB Segerberg was born in 1947.[12] This Segerberg is also Chairman of the Board of a company named Wireless House, in Sweden.[7]

Another Swedish Jan Segerberg, who looks like a different person than the SIS guy is CEO of a company named Skane-Gripen.[13]

5.1.8 Wirgler, Robert

Austrian Ministry of the Interior.[1]

5.2 Contributors to the Beast

The work these folks do allows the SIS system to function, but the individuals themselves are probably unaware of their contribution.

5.2.1 Locke, Dave

Email: locke@hursley.ibm.com

Answers questions on behalf of IBM for clients on the MQSeries news server.

5.2.2 White, Matthew B.

Email address: whitemat@uk.ibm.com

Answers questions on behalf of IBM for clients on the MQSeries news server.

5.3 Staffing Notes

In Strasbourg, 1995: “The functioning of the C-SIS is ensured by a staff of nine managers and 18 operators, organised in 5 teams.”[5]

6 Misc Notes

6.1 Known Compromises

- “documents and information were leaked from one of the SIRENE Bureaux in 1997”[3]
- It also appears that cops give out the information frequently for cash or personal motives.

6.2 Other

“The 1998 Annual Report on the Schengen Convention dated 5 November 1999 is the last one - in future there will be no annual report on the operation of Schengen”.[15]

6.3 Good URLs

- <http://elj.warwick.ac.uk/jilt/02-1/karanja.html> - Very good overview of SIS and SIRENE.
- <http://www.fred.dk/artikler/petting/sirene.htm> - In Danish (Swedish? German?), but appears to have a copy of the SIRENE manual. The actual pages are linked at:
- http://www.fred.dk/artikler/petting/_sirene/sirene.htm
- <http://www.cnpdpi.pt/schengen/> - Schengen Joint Supervisory Authority
- http://hetti.datatilsynet.no/esporspor/2002/2/JSA_rapport.htm - a study by the JSA
- <http://www.fipr.org/polarch/> - They seem to track down some good documents.

6.4 URLs Worth Exploring

Links not fully explored but worth researching. Also includes links with just a little bit of info, but still decent. In a variety of languages...

- <http://www.datenschutz-berlin.de/>

- <http://www.intermin.fi/eng/schengen/index.htm>
- <http://europa.eu.int/scadplus/leg/en/lvb/l33020.htm>

6.5 Find documents:

- "The Schengen Information System; A human rights audit", by JUSTICE 2000.
- Europol Annual Reports
- EU: SCHENGEN CONVENTION - NEW TECHNICAL AND INSTITUTIONAL DEVELOPMENTS IN THE OFFING. (I European report, no. 2486, March 25,2000. s. 8 - 11).

6.6 Questions

- What database is being used? Maybe it's IBM's DB2 since they got a huge contract... It may be Oracle, no? They have an office in Strasbourg.

6.7 Stats

6.7.1 Annual figures for "alerts" (record entries) entered into the SIS since its launch in March 1995:[15]

- 1995: 3,868,529
- 1996: 4,592,949
- 1997: 5,592,240
- 1998: 8,826,856 (5.3.98)
- 1999: 9,748,083 (23.5.00)

6.7.2 More stats...

Breakdown of "hits", where an "alert" relates to apprehending or arresting a person, finding a vehicle etc. The figures for "internal hits", in a state in response to an "alert" entered outside that state and "external hits", where there is a hit in another state to the one that entered the data have been combined here.

The total number "hits" is followed by the total number of "alerts" on the SIS in brackets []:[15]

- Articles 95-99 deal with people, not objects:
covering 842,256 names and 482,437 aliases.

- Article 95
Extradition: 2,416 [10,914]
- Article 96
People to be refused entry/deportation: 21,711 [760,347]
- Article 97
Missing persons: 1,595 [28,372]
- Article 98
Witnesses, wanted by court: 3,773 [35,297]
- Article 99
People placed under surveillance: 2,221 [11,126]
Vehicles place under surveillance: 244 [6,210]
- Article 100
(Objects) Stolen vehicles: 13,917 [990,963]
Firearms: 149 [236,372]
Missing "blank documents": 4,775 [165,477]
Identity documents: 4,228 [6,232,168]
Bank notes: 1 [808,411]

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- [4] Systematic Software Engineering. Sirene. <http://www.systematic.dk/>.
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