*Global Aviation Information Network*
*(GAIN)*

*Updated List of*

# Major Current or Planned Government Aviation Safety Information Collection Programs


***Prepared By:***

***GAIN Government Support Team (GST)***

**SEPTEMBER 2004**

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*********Information current as of June 2003*

## INTRODUCTION

The Global Aviation Information Network (GAIN) Government Support Team (GST) consists of invited representatives from government organizations who work together to:

1. Promote and facilitate the collection and sharing of safety information among the worldwide aviation community
2. Help reduce legal and cultural barriers that discourage the collection and sharing of safety information
3. Encourage government organizations to support the development and implementation of GAIN

As part of number one above, the GAIN GST is tasked with identifying and increasing awareness within the aviation community of current and planned government safety information collection and sharing programs. To accomplish this task, each GST member country or organization was asked to provide a description of their "major" collection and sharing programs. For each program, GST members provided a standardized fact sheet containing pertinent information such as purpose, description, source of data, contact point, etc. The GST anticipates that increasing awareness of these programs, both within and outside GST member countries and organizations, will facilitate the creation or enhancement of similar reporting programs leading to improvements in aviation safety worldwide.

The initial list of programs included 24 fact sheets submitted by GST members, which were compiled in a report and distributed at the GAIN V World Conference in Miami, December 2001. Those fact sheets were alphabetically ordered by country or organization and covered both mandatory and voluntary reporting programs. For the GAIN VI World Conference in Rome, June 2003, the GST updated the initial report adding new fact sheets and revising the original submissions as needed. The updated version of the report increased the number of fact sheets to 34. The current update for the GAIN VII World Conference in Montreal, September 2004 contains a total of 38 fact sheets. The GST intends to add facts sheets to those contained herein on a regular basis and make them available on the GAIN web site, *www.gainweb.org*.

For more information on GST activities, please contact the GST co-chairs listed below.

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## SUMMARY

The updated GST report on "Major Current or Planned Government Aviation Safety Information Collection Programs" contains 38 fact sheets. All of the reported programs except one are currently in use with Aerodromes and Air Navigation Safety Information Management System (AANSIMS) reported as planned for the future. Most of the reported programs listed identifying safety deficiencies and concerns as their primary purpose for collecting the data. Other purposes cited less frequently are: tracking safety concerns, aircraft airworthiness, inspection certification, equipment malfunctions, etc. Some programs were very specialized collecting data such as medical information and aircraft data. A few programs cited plans to structure their data to enable them to transfer information to the European Co-ordination Centre for Aviation Incident Reporting Systems (ECCAIRS). ECCAIRS is a set of tools made available to member states by the European Commission to facilitate the exchange and integration of civil aviation occurrences.

Because the information requested by the fact sheets is general in nature such as *purpose, description, source of data, users of data, future plans etc.*, some of the following statistics are not consistently reported, while others are derived based on knowledge of the program. Looking at the reported information shows data collected as far back as 1966 (US SDRS) and the greatest number of resident reports exceeding 120,000 (MORS). Most of the government collection programs cited mandatory reporting (20) with others citing voluntary (10). Some cited both mandatory and voluntary (3) and five were unknown. The majority of programs collect incidents (20) with others collecting accidents (10) and some collecting both accidents and incidents. Seven programs cited reporting is confidential or confidentiality can be requested. The most frequent users of the data are primarily government followed by the aviation industry and then the public.

## Aerodromes and Air Navigation Safety Information Management System (AANSIMS)

**Country/Organization:** Canada / Transport Canada

**Voluntary or Mandatory Reporting Program:** Not applicable

**Purpose of Program:** AANSIMS will be a central repository for business information and intelligence relating to Canadian aerodromes and air navigation services. Assembled from various sources including regulatory audits and inspections, ongoing monitoring of aerodromes and air navigation service providers, environmental scans of the industry, etc., AANSIMS is intended to provide information in support of risk and hazard identification and assessment, and to assist in tracking the effectiveness of any implemented mitigations. AANSIMS will also include audit/inspection checklist generation and supporting regulatory standards (through integration of NASD).

**Source of Data:** Ongoing regulatory audits, inspections and monitoring of Canadian aerodromes and Canadian Air Navigation Service providers. Ongoing environmental scans of the aviation industry. Other sources of information relating to Canadian aerodromes and Canadian Air Navigation Services.

**Users of Data:** Transport Canada Aerodromes and Air Navigation personnel, both Headquarters and Regional (HQ – 59 users; Regional – approx. 55)

**Future Plans for Program:** AANSIMS is in the planning stage at this time, with implementation expected to take place over a four-year period from 2004/05 through 2007/08. The functionality of the National Aerodrome Safety Database (NASD) will be integrated into AANSIMS approximately 2 years into the project.

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## Aircraft Maintenance Engineer System (AMES)

**Country/Organization:** Canada /Transport Canada

**Voluntary or Mandatory Reporting Program:** Mandatory (Regulatory)

**Purpose of Program:** Identify and Document issue of Aircraft Maintenance Engineer licences (AME)

**Description of Program:** AMES is a regulatory application designed to document, maintain and issue Aircraft Maintenance Engineer licenses. The application maintains license information including examination, issue, rating, renewal and personal information for AME's. Provides statistical information to public and private sectors as required.

**Source of Data:** Input from regional offices/inspectors/administrative support.

**Users of Data:** Transport Canada Civil Aviation personnel (355)

**Future Plans for Program:** Update from Access based program to Oracle based program (September 2004); update of web based program; interface from the Flight Training and Aviation Education (FTAE) program for direct download of AME examination data (technical/regulatory) (September 2004); investigate need for interface with Enforcement Management System (EMS) with respect to licensing suspension information; investigate making specific elements of program available to external clients via internet access (i.e. AME's can check their own data).

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## Aviation Safety Information System (ASIS)

**Country/Organization:** Canada – Transportation Safety Board of Canada (TSB)

**Voluntary or Mandatory Reporting Program:** Mandatory and Voluntary – Based on the reporting standards in Annex 13 to the Chicago Convention on International Civil Aviation.

**Purpose of Program:** To provide the Canadian and international aviation community with safety information as determined from accidents and incidents

**Description of Program:** The enabling legislation for the Transportation Safety Board (TSB) of Canada requires mandatory reporting for all aviation accidents and for many incidents involving airplanes with a weight greater than 5700 kilograms and helicopters with a maximum weight greater than 2250 kilograms. Safety information is also collected for non-reportable incidents.

Occurrence information is entered into ASIS and verified by aviation safety investigators and by other staff. Data extraction is facilitated by query tools developed by TSB, as well as by the use of Access and Impromptu. There is a component of ASIS that is used to systematically identify safety deficiencies and track safety action. Text fields in ASIS are searchable with computer software such as Fulcrum. ASIS contains more than 38,000 records from 1976 to July 2001. The TSB publishes monthly and yearly aviation safety statistics derived from the ASIS data.

**Source of Data:** Accident and serious incident investigations in Canada and in other countries in accordance with Annex 13.

**Users of Data:** TSB investigators in identifying safety deficiencies, Transport Canada and other Canadian Government Departments, ICAO AIG, safety organizations from other countries, and the aviation industry both in Canada and in other countries.

**Future Plans for Program:** There are plans to permit authorized officials to have direct electronic access to some data.

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## Canadian Civil Aircraft Register Computer System (CCARCSE)

**Country/Organization:** Canada / Transport Canada

**Voluntary or Mandatory Reporting Program:** Mandatory

**Purpose of Program:** CCARCSE is a National client/server system that came into being in May, 2002. It is an automated system for registering aircraft and maintaining and publishing the Canadian Civil Aviation Aircraft Register. The system allows inquires on all aircraft currently registered in Canada, on previous aircraft owners and on aircraft that have been removed from the Register. As well as generating Aircraft Registration and Leasing Documents, the system gathers information used in the preparation of statistical reports. Current and historical information, which is accessible by the public, is on the Internet for query and report purposes. Current registration information is available on CD-Rom. CCARCSE also has a large web component that allows internal and external users to query on the registration, aircraft and owner information in a variety of ways. It is a very busy site. Furthermore, manufacturers may enter their own aircraft, assign marks to the aircraft and request aircraft exports.

**Source of Data:** Aircraft Register information.

**Users of Data:** Aircraft Registration and Leasing; other Civil Aviation branches access the mainframe for query purposes.

**Number of users is accessing the client/server:** Approximately 100 users

**Number of CCARCSE Web internal and external users:** Thousands

**Future Plans for Program:** Changes will incorporate new functionalities driven by regulatory change; and will allow for process improvements which will enable a new way of auditing aircraft registration and leasing activities, incorporate interfaces to NACIS, FTAE, CAWIS and RDIMS, as well as the possibility of online (Internet) registration and mark control.

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## Civil Aviation Daily Occurrence Reporting System (CADORS)

**Country/Organization:** Canada / Transport Canada

**Voluntary or Mandatory Reporting Program:** Mandatory

**Purpose of Program:** CADORS data is used to provide timely information concerning operational occurrences within the National Civil Air Transportation System and is used in the early identification of potential aviation hazards and system deficiencies. The new version of the CADORS application makes use of web based technologies thereby permitting accessibility to a broader user base; has built-in data integrity checks that were designed to improve the quality and the reliability of the data; has improved querying and reporting capabilities that provide the users with lots of flexibility.

**Source of Data:** NAV CANADA's AOR reports, TSB reports, airports, police forces, public, etc.

**Users of Data:** Transport Canada Civil Aviation and External Aviation Stakeholders.

**Future Plans for Program:** Phase II will look at further enhancements to the application both on the data entry side and the query/reports side.

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## Civil Aviation Medical Information System (CAMIS)

**Country/Organization:** Canada/Transport Canada

**Voluntary or Mandatory Reporting Program:** Mandatory for Phase I as it applies to Transport Canada Civil Aviation Medicine employees. Voluntary for Phase II as it will apply to external partners.

**Purpose of Program:** CAMIS has replaced the National Aviation Medical Information System (NAMIS) in the Fall 2002 (November). CAMIS has mainly the same functions as NAMIS but is more functional, user-friendlier, more up-to-date and contains a lot more information.

**Description of Program:** CAMIS is web-based application containing licensed aviation personnel information including: tombstone data, medical assessment data, seminar and medical continuing education data and CAME (Civil Aviation Medical Examiner) data. The medical assessment data is currently entered at the regional offices and in headquarters and batched on a nightly basis to Transport Canada's Distributed Air Personnel Licensing System (DAPLS), which generates medical certificates for aviation personnel.

**Source of Data:** The tombstone information is originating from the DAPLS database. The aviation medical reviews and all other medical data have been converted from the old NAMIS database.

**Users of Data:** Civil Aviation Medicine (CAM) – Approximately 30-40 users.

**Future Plans for Program:** To extend the use of CAMIS to our external partners, the Civil Aviation Medical Examiners (CAMEs).

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## Computerized Airworthiness Information System (CAIS)

**Country/Organization**: Canada / Transport Canada

**Voluntary or Mandatory Reporting Program**: Mandatory

**Purpose of Program**: The Computerized Airworthiness Information System (CAIS) is a national, mainframe based information system providing all Air Certification, Maintenance & Manufacturing, and Airworthiness offices with access to current airworthiness data on all Canadian-registered aircraft. CAIS is a database of basic tombstone information from the paper 5008 files on each aircraft, and a list of all airworthiness directives (Ads) applicable in Canada. The CAIS 5008 files are largely maintained by regional airworthiness staff, while the AD database and product make/model standardization table are maintained by the HQ Continuing Airworthiness Division. CAIS imports owner information from CCARCS, and exports data to WSDRS (mainframe, Oracle, Web, NAPA, EMIS, AVSTATS, Occurrence Data, and the TC Inter/Intranet website).

**Source of Data**: CAIS is a database of basic tombstone information from the paper 5008 files on each aircraft, and a list of all airworthiness directives (Ads) applicable in Canada.

**Users of Data**: Transport Canada Air Certification, Maintenance & Manufacturing, and Airworthiness offices.

| | |
|---|---|
| Users: | 400+ authorized |
| HQ: | 25 |
| Regions: | 375 |

**Future Plans for Program**: CAIS mainframe is scheduled to be decommissioned in Spring of 2004, to be replaced with CAWIS (Continuing Airworthiness Web Information System) a new Oracle, web based Internet/Intranet system which will continue to support regional airworthiness data entry, AD maintenance and will also allow direct submission of AAIR flight hours data by aircraft owners.

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## Distributed Air Personnel Licensing System (DAPLS)

**Country/Organization:** Canada / Transport Canada

**Voluntary or Mandatory Reporting Program:**

**Purpose of Program:** DAPLS is a regulatory application designed to maintain and issue Air Personnel Documents. The application maintains license and permit information including medical, rating and personal information for flight crew, air traffic controllers, and other aviation personnel. A skeleton of information is supported on the Transport Canada mainframe for other applications that require Licensed Personnel information.

**Source of Data:** An interface between Health Canada transfers medical information daily.

**Users of Data:** Personnel license holders.

**Users:** 789

**Future Plans for Program:** Plans for the future include an interface from Enforcement Management System (EMS) information on licensing suspensions.

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## Flight Training and Aviation Education (FTAE)

**Country/Organization:** Canada / Transport Canada

**Voluntary or Mandatory Reporting Program:** Voluntary

**Purpose of Program:** The Flight Training and Aviation Education (FTAE) computer system is designed to utilize data compiled from flight test reports and written examination answer sheets to provide current on-line information to Transport Canada staff whose responsibility it is to monitor the quality of flight training and aviation education activities nationally and to ensure that the required standards are maintained. To achieve this, FTAE utilizes two main sub-systems: (1) the Written Examination Development and Analysis subsystem and (2) the Flight Training Standards Monitoring subsystem.

**Description of Program:** The written Examination Development and Analysis sub-system consists of: a question bank which stores individual test questions by subject area in English and French; an examination development function which accesses the question bank to allow for the development and maintenance of the various written examinations required for all flight crew, flight dispatcher and AME licenses and ratings; a scanning function which optically reads the examination answer sheet, scores the exam and provides printed feedback to the candidate identifying his or her weak knowledge areas; and a reporting function which uses the stored examination results to provide both on-line and hard copy reports for analysis purposes. Although the function to complete an examination by paper still exists, examinations are now completed using computer terminals with on-line access to the exam databank.

The Flight Training Standards Monitoring sub-system stores flight test records of Flight Training Units; provides a record of each flight instructor's students performance on their flight test and a record of all flight tests conducted by each Designated Flight Test Examiner (DFTE). Other information about Flight Training Units, flight instructors, designated flight test examiners, authorized persons and company check pilots is also recorded. A scanning function similar to that of the written examination sub-system is used to collect the information from flight test report forms that rate the flying skills of candidates applying for private and commercial pilot licenses as well as multi-engine, instructor and instrument ratings on aeroplane and helicopter category aircraft. In addition, the system scans Pilot Proficiency Check (PPC) flight test reports on behalf of the Commercial & Business Aviation branch. A reporting function uses the stored flight test results to provide both on-line and hard copy reports for monitoring and analysis purposes. An audit and base inspection-tracking component also forms part of the Flight Training Unit database.

**Source of Data:** To achieve this, FTAE utilizes two main subsystems: (1) the Written Examination Development and Analysis subsystem and (2) the Flight Training Standards Monitoring subsystem.

**Users of Data:** Flight Crew Examinations, Flight Training Standards, Personnel Licensing, AME Licensing and Training, Commercial and Business Aviation, Aircraft Services, Flight Operations Training, Air Canada, Flight Operations Training (Toronto).

Users: 359
HQ: 60
Regions: 169
TCCs: 130

**Future Plans for Program:** Plans are underway to allow the AMES database access to view the AME examination results in a similar way that the DAPLS database does right now with Flight Crew examinations.

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## National Aerodrome Safety Database (NASD)

**Country/Organization:** Canada / Transport Canada, Civil Aviation, Aerodrome Safety

**Voluntary or Mandatory Reporting Program:** Voluntary

**Purpose of Program:** Airside safety inspections at certified airports/heliports.

**Description of Program:** Application produces Aerodrome safety checklists for the Transport Canada Inspectors by using Aerodrome site data to filter the Transport Canada standards and regulations down to that appropriate for the specific aerodrome. It consists of an Aerodrome site inventory, coded standards and regulations and the logic necessary to the filtering of the standards. Post Inspection/Audit results are kept in the database and reports are generated by the application.

**Source of Data:** Data is maintained by Aerodrome Safety regional inspectors.

**Users of Data:** Transport Canada Aerodrome Safety and Airspace personnel. Some implication by special interest groups such as Contingency Operations.

**Future Plans for Program**: Increase in scope of the program to include airport operators response to inspections and audits as well as self-inspection. This is already at the testing stage. Addition of seaplane base inspection as soon as standards are issued. At a later date, NASD will be integrated within the context of the planned Aerodromes and Air Navigation Safety Information Management System (AANSIMS).

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**Comments:** At the present time this is an internal application posted on the Transport Canada Intranet only. It is protected by two layers of user name and password. The external portion, for the airport operators, will be posted on the Internet but it will also be password protected and access will be limited to selected airports.

## National Aeronautical Product Approval (NAPA) System

**Country/Organization:** Canada / Transport Canada

**Voluntary or Mandatory Reporting Program:** It is now a mandatory program.

**Purpose of Program:** The National Aeronautical Product Approval (NAPA) is an automated system supporting the certification, modification, repair and inspection of aeronautical products in Canada and Canadian products abroad. NAPA is instrumental in helping Aircraft Certification to achieve departmental objectives of a safe and efficient aviation system, as well as providing certification data to the aviation community and international authorities.

**Description of Program:**
The NAPA suite is made up of:

- an oracle database;
- the NAPA interface (PowerBuilder) used by Transport Canada employees as a tool to manage/track certification/mod projects and related information;
- the NAPA certificate web link, a web application which searches the NAPA database and displays certificates on the web for public use; and
- the NAPA Delegate Web Link, a web application used by Canadian aviation industry delegates to access the NAPA database in order to submit applications, track their projects, and issue Limited Supplemental Type Certificates (LSTCs) and Repair Design Certificates (RDCs).

**Source of Data:** Headquarters, Regional and Industry Certification Base.

**Users of Data:** Transport Canada personnel (engineers, project managers, airworthiness inspectors and other technical personnel), industry delegates, foreign authorities, and the aviation community use the system to perform a variety of functions.

**Future Plans for Program:** Continuance of 350 enhancements together with bug fixing and workflow initiatives.

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## National Civil Aviation Information Systems (NACIS)

**Country/Organization:** Canada / Transport Canada

**Voluntary or Mandatory Reporting Program:** Mandatory

**Purpose of Program:** Conceived in response to a Ministerial commitment in 1986 that economic regulatory reform would not be allowed to reduce safety standards, the purpose of NACIS is to improve the efficiency of certifying and inspecting air operator operations. Since its inception the NACIS application has been expanded to include aircraft maintenance and manufacturing as well as general aviation requirements. NACIS is an application system that contains or has access to all pertinent inspection, activity, and certification information on commercial air operators, aircraft maintenance organizations, flight training units, and other companies of interest. The NACIS application:

- Provides access to information required for issuing and maintaining certification documents;
- Improves the qualify of information throughout Civil Aviation;
- Unifies, centralizes, and shares information amongst Civil Aviation branches and other Civil Aviation national applications;
- Standardizes and streamlines the certification process for several branches nationally;
- Facilitates regional printing of certification documents for several branches;
- Assists managers in the monitoring and scheduling of audits;
- Tracks outstanding audit deficiencies; and,
- Provides DATA to ARASS.

**Source of Data:** Inspection and certification information on some 2200 commercial air operators, 1500 aircraft maintenance organizations, 300 certified flight training units, and approximately 1500 other types of companies.

**Users of Data:** Inspectors, managers, superintendents, and clerical staff from the Commercial and Business Aviation, Aircraft Maintenance & Manufacturing, General Aviation branches, and other branches within some regions, of the Transport Canada Civil Aviation Directorate. Basic information from the NACIS application is available to the public through the following Transport Canada website.

- Approved Organizations (www.tc.gc.ca/aviation/ActivePages/AO)
- Operator List (www.tc.gc.ca/aviation/ActivePages/OLS/newindex.asp)
- Air Operator http://www.tc.gc.ca/aviation/activepages/AirOp
- Minister Delegates (www.tc.gc.ca/CivilAviation/maintenance/AARPE/menu.asp)
- Approved Aircraft Simulator (www.tc.gc.ca/aviation/applications/simulators)
- Flight Training Units (www.tc.gc.ca/aviation/ActivePages/ftae/Index.htm)

Information from the NACIS application is also provided to the following Civil Aviation national application systems:

- FTAE (Flight Training and Aviation Education System – GA)
- GMEL (Generated Minimum Equipment List – C&BA)
- WSDRS (Web Service Difficulty Reporting System – AC)
- CADORS (Civil Aviation Daily Occurrence Report System – SS)

**Future Plans for Program:**

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## SECURITAS – The TSB Confidential Reporting System

**Country/Organization:** Canada – Transportation Safety Board of Canada (TSB)

**Voluntary Reporting Program:** Voluntary and Confidential

**Purpose of Program:** To provide a non-punitive and confidential method of obtaining safety information and promoting an atmosphere to facilitate effective reporting of such safety information.

**Description of Program:** SECURITAS is a multi-modal confidential reporting program intended to receive voluntary reports on safety concerns in the marine, rail and air modes of transportation. It provides a means by which persons with safety concerns can report incidents and potentially unsafe acts or conditions relating to the Canadian transportation system that would not normally be reported through other channels. Data compiled from reports may support TSB studies and analyses on safety-related matters such as operating procedures, training, human performance and equipment suitability. Analysis of the reported concerns can help identify widespread safety deficiencies. Reported information can lead to the TSB making formal recommendations to the Minister of Transport or other appropriate departments for safety action, by pooling data from the reports with other accident/incident reports, studies and analyses, and by sharing it with other agencies and countries, greater insight into national and global transportation safety issues is gained.

**Source of Data:** Anyone with a safety concern, including those who wish to have their identity protected. The information is provided on a confidential basis by flight crew, air traffic controllers, maintenance personnel, passengers and other persons with aviation safety concerns.

**Users of Data:** When a reported concern is validated as a safety deficiency, the TSB normally forwards the information, often with suggested corrective action, to the appropriate regulatory authority or air traffic services organization. However, there are occasions, depending on who can best effect corrective action, when specific transportation organizations, companies and/or agencies are the primary recipients of the TSB's observations and analysis. No action will be taken that might compromise the identity of the reporter.

**Future Plans for Program:** Increased resourcing for SECURITAS is being studied in order to enhance response times.

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## Web Service Difficulty Reporting System M/F (WSDRS)

**Country/Organization:** Canada / Transport Canada

**Voluntary or Mandatory Reporting Program:** Voluntary/Mandatory

**Purpose of Program:** WSDRS records data on aircraft equipment malfunctions, defects and failures to assist Airworthiness personnel in issuing Airworthiness Directives and Safety Advisory Notices. It is a database based on the contents of the Service Difficulty Report forms filed by the aviation community and is compatible with, and similar to, the system used by the FAA. It facilitates the identification of trends and conditions adversely affecting the airworthiness of aeronautical products.

**Source of Data:** The data is reported by two aviation communities, one being purely voluntary by private individuals (usually on recreational aircraft) and the other by those required to submit reports per the Canadian Aviation Regulations (CARs).

WSDRS database also contains data from the United States and Australia due to a data exchange program in place with these countries.

**Users of Data:** Transport Canada Civil Aviation; external clients (air carriers, aviation organizations, manufacturers, AMEs, aircraft owners); international exchange (FAA/Australia)

**Future Plans for Program:**

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## ECCAIRS – European Co-ordination Centre for Aviation Incident Reporting Systems

**Country/Organization:** European Union/European Commission.

**Voluntary or Mandatory Reporting Program:** Mandatory, based on EU Directive 2003/42/EC of the European Parliament and of the Council of 13 June 2003 on occurrence reporting in civil aviation.

**Purpose of Program:** The only objective of occurrence reporting as referred to in the EU Directive is "the prevention of future accidents and incidents". The purpose of the ECCAIRS programme is to contribute to aviation safety through early detection of potentially hazardous situations in a secure, integrated, EU wide collection of incident and accident (occurrences) reports.

**Description of Program:** Most aviation authorities in the EU have, in different ways, collected information about aviation incidents and accidents. Since these authorities had proprietary data-formats (electronic or paper based) mutual access to information was almost impossible. To improve the situation the European Commission started an activity called ECCAIRS (European Co-ordination Centre for Aviation Incident Reporting Systems) and subsequently proposed a Directive on Occurrence Reporting in Civil Aviation. Each of the 25 Member States of the EU will have to comply with the provisions of the Directive by 4 July 2005

The Directive requires EU Member States to collect mandatory reportable occurrences in civil aviation. These occurrences (a list of examples is presented in the Directive) must be reported by various categories of persons active in areas related to civil aviation (e.g. operators, manufacturers, maintenance organisations, air traffic controllers, aerodrome managers, ground handling staff, etc). The ECCAIRS Reporting System is a set of tools made available by the European Commission, which facilitates the exchange and integration of these occurrences.

Each Member State shall designate a competent authority (typically the CAA or the AAIB) that enforces the procedures for collecting and processing the occurrence reports. Furthermore the Commission will set-up a network that will allow the Member States to exchange and integrate safety information mutually and at European level. At the heart of this network an information system integrates, disseminates and assesses data and information at European level. Data is collected and assessed locally by each Member State. Because of the compatible data-formats Member States can also mutually exchange data on a peer-to-peer basis.

The future development and usage of the ECCAIRS Reporting System and the related collaborative network of involved organisations, is determined in the first place by the ECCAIRS steering committee, which is formed by representatives of the EU organisations applying the software and exchanging data. In additions organisations like ICAO, JAA, Eurocontrol and others have a seat in this forum.

Because of the usage of an internationally accepted data standard (ICAO-ADREP), a lack of state-of-the-art tools worldwide and limited resources in many organisations the interest for ECCAIRS is spreading also outside EU borders and outside the authority domain. ICAO has adopted the ECCAIRS information system as the basis for their new generation ADREP system (ADREP 2000), ECCAIRS has become a viable alternative for specific reporting tools in the Air Traffic management world (Eurocontrol and Deutsche Flug Sicherung) and many authorities worldwide (South Africa, Norway, China, Porto Rico, etc) are using ECCAIRS or have asked for an evaluation version.

**Future Plans for Program:** Now that the issues of data-collection, -integration and -exchange have basically been resolved, the next, and as least as important, phase of the ECCAIRS activity will start: data-analysis including risk-assessment. Having implemented the related legislation and having reached complete data-compatibility between ECCAIRS users, a similar standardisation and code-sharing approach is being started for data-analysis. Under guidance of a working group co-ordinated by the JAA and representing not only the authorities but also the other main players from the aviation industry an inventory will be made of analysis capability requirements for ECCAIRS data. From this list, in order of priority set by the authorities, tools will be made available to implement these capabilities.

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**Comments:** The ECCAIRS Reporting System is available free of costs, including basic support like a help-desk and training facilities, to authorities and investigation bodies of the European Union. In addition the software can be used, after authorisation, by non-EU authorities and investigation bodies on an as-it-comes basis. In these cases support is limited to available resources.

## VASA, a Microsoft Access-based database

**Country/Organization:** Finnish Flight Safety Authority (FFSA), Analysis Section, (CAA Finland)

**Voluntary or Mandatory Reporting Program:** Mandatory Reporting

**Purpose of Program:** Collecting locally data of occurrences like aircraft accidents, accidents including minor damage, hazards to flight safety or technical incidents. Incidents are passed to appropriate FFSA sections for following possible and corrective actions (no blame culture).

**Description of Program:**

- Reporting Form Used: mostly different kind of national and formal forms from appendix of the regulation, but other forms and informal reports are accepted too.
- Period of Reporting: from 1985 to present, but comprehensive data since 1994.
- Approximate Number of Reports: over 4000 reports since 1985
- Are Reports De-identified: No

**Source of Data:** Airlines, commercial aviation companies and operators, Finish Civil Aviation Authority (FCAA) Air Navigation Services Department, individual pilots, parachuting clubs, informal reports made by anyone concerned about flight safety.

**Users of Data:** Flight Safety Authority and CAA, National Accident Investigation Board. A monthly report based on VASA is published for internal use only.

**Future Plans for Program:** European Co-ordination Centre Aviation Incident Reporting System (ECCAIRS) database will gradually replace VASA in 2002 and old information will be transferred into ECCAIRS.

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## Aviation Accident/Incident Database

**Country/Organization:** FRANCE / B.E.A. (Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile)

**Voluntary or mandatory Reporting Program:** Mandatory

**Purpose of program:** The BEA is the official organization responsible for technical investigations on aviation accidents and incidents which occur on French territory. These investigations are aimed at improving civil aviation safety. To do this, they must identify the circumstances of the accident or incident, determine the causes and develop recommendations intended to prevent similar events recurring.

A European directive specifically forbids that investigations aim to apportion blame or liability to persons or companies involved in the event. In addition, in the context of Annex 13 of the International Civil Aviation Convention, the BEA represents France in investigations carried out abroad for any accident or incident involving an aircraft of French design or construction, an aircraft operated by a French airline or French passengers.

**Description of program:** The BEA accident and incident database is based on the ECCAIRS system (European Coordination Center for Aviation Incident Reporting Systems) based on ADREP 2000 taxonomy. ECCAIRS is a database made available by the European Commission that refers to international definitions. The BEA has developed a French version of ECCAIRS. The use of the ADREP 2000 taxonomy facilitates the transmission of ADREP reports to ICAO and data sharing with other organizations using the same software.

**Source of data:** On-duty investigators fill the database upon reception of a notification. The record, which first contains factual data, is later updated as the investigation is being carried out. The new ECCAIRS database was implemented on January 1$^{st}$, 2004 and contains approximately 15000 occurrences that cover the last thirty years (BEA involved in the investigation). Most of these occurrences were converted from the former database (eighties to 2003). Other (mostly occurrences from the seventies) were sent by ICAO's ADREP system since both database are now compatible and using the ADREP 2000 taxonomy.

**Users of Data:** The database is not directly available to the public. However, any request for information related to safety can be fulfilled. The availability of the database on the BEA website is being studied.

**Future Plans for Program:** The development of new applications allows the generation of automatic reports, statistics and notifications. New analysis modules as well as more functionality should be incorporated in the database in the oncoming years.

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## Confidential Event Reporting System (Recueil D'evénements Confidentiel)

**Country/Organization:** FRANCE / B.E.A. (Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile)

**Voluntary or Mandatory Reporting Program:** Voluntary

**Purpose of Program:** To prevent future accidents. After an accident or a serious incident, the BEA undertakes a technical investigation aiming to prevent future accidents. Like investigations lead by other countries on various catastrophes, experience shows that an accident or a serious incident is seldom explained by a single cause, but generally stems from multiple causal factors which, if taken separately, would not have necessarily lead to such serious consequences. Preventing these causes before their combination leads to an accident or serious incident could enhance aviation safety. The REC, like ASRS launched by NASA, aims to study safety reports about unusual situations that could have led to an accident.

**Description of Program:** The REC program, which started in 2000, is in charge of collecting confidential events. Its current framework deals with all activities related to General Aviation (training, aerial work, helicopters, ultra lights, gliders, etc.).

The REC program consists of collecting reports of minor incidents or the relation of events that occurs separately, and formalizing them in order to facilitate their exploitation by the aviation community on a large scale. It works thanks to the voluntary input of aviation users who concur to enhance safety. They have the possibility to report on an event which is not subject to a mandatory procedure but which is likely to produce useful information for the prevention of accidents.

Safety information is disseminated though a monthly publication called "REC Info".

**Source of Data:** Reports sent by aviation users who concur to enhance safety. The reports are stored in a database that facilitates the search of events for future safety studies. Specific fields are found like:

- a simple description of the event itself,
- causes,
- safety barriers that prevented the accident from occurring,
- safety issues linked to the event.

Therefore these special fields are found in each record in addition to other fields and a narrative. Events are encoded and categorized in order to facilitate their query related to specific themes for safety analyses.

**Users of Data:** Whoever is interested in enhancing aviation safety through prevention.

**Future Plans for Program:** This program should include corporate aviation soon, especially companies that encounter difficulties to set up a voluntary reporting program on an internal basis.

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## Incident Reporting System

**Country/Organization:** FRANCE – DGAC

**Voluntary or Mandatory Reporting Program:** Mandatory - Based on the JAR-OPS1 (airlines) reporting regulation and its French variant.

**Purpose of Program:** To improve the collection and the analysis of incident data and to encourage the safety information sharing.

**Description of Program:** Pilots are required to report any incident that has/might have compromised the safety of the flight (jar-ops 1.420). For serious events detected after the flight, by the Flight Data Monitoring for instance, the operator has also to send its report to the Authority but in this case, the anonymity of persons has to be respected.
Data is centralized and is inserted into the ECC-AIRS (European Coordination Center for Aviation Incident Reporting Systems) database that uses the ICAO ADREP taxonomy. This software has been developed by the European Union and is provided to the EU member states. For the time being, it is implemented in France at a national level. In the near future, DGAC field offices, that supervise the French airlines, will store directly their data in the ECC-AIRS national network. Thanks to this direct access, an improvement of the data quality and richness is expected.

A complementary analysis is performed by the SFACT (Aeronautical Training and Technical Inspection Department of the DGAC) experience feedback office.
The ECC-AIRS system that has been used as a primary incident reporting system since January 2000 contains 1,600 events.

**Source of Data:** French Operators

**Users of Data:** DGAC

**Future Plans for Program:** The next revision of the jar-ops1 reporting regulation will integrate a list of reportable occurrences, grouping technical and operational events. These regulatory evolutions are conducted in parallel with the future European Directive on the mandatory report of incidents. Besides, a link between the tool BASIS, used by several airlines, and ECC-AIRS is under construction. It will aim at facilitating the exchange of data between the airline and the DGAC. In the long term, a European database based on ECC-AIRS is planned. At the present time, information exchange protocols are being discussed amongst European Authorities.

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## Quality Assurance Program for Air Traffic Services

**Country/Organization:** FRANCE / DGAC/DNA/SCTA

**Voluntary or mandatory Reporting Program:** Mandatory

**Purpose of Program:** To provide the Air Traffic Control managers with information related to safety occurrences in ATM. The Quality Assurance Program is based on ESARR2 (ESARR: Eurocontrol Safety Regulatory Requirements) that is going to be transposed in the French Regulation.

**Description of program**: The program is a mandatory reporting system for ATC related issues (AIRPROX, TCAS Resolution Advisory, Runway incursion, near CFIT….) using the INCA database. INCA is the French database for Air Traffic Control accidents or incidents. Events are classified by "type of event" and "cause", using Heidi vocabulary (taxonomy based on ADREP 2000 and developed by Eurocontrol). Feedback entities called "Quality Service" are in place in the main airports and Enroute Control Centres.

**Source of data:** Event notification forms generally filled by ATC operators or staff belonging to a "Quality Service" entity.

**Users of Data:** DGAC (DNA), Eurocontrol

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## ICAO – ADREP (Accident/Incident Data Reporting) System

**Country/Organization:** ICAO

**Voluntary or Mandatory Reporting Program:** Mandatory – Based on the reporting standards in Annex 13 to the Chicago Convention on International Civil Aviation (accidents to aircraft over 2250 kg max certificated take-off mass and incident reports to aircraft over 5 700 kg max certificated take-of mass). Some States report more than what is required by Annex 13.

**Purpose of Program:** To provide the international aviation community with information on accident and serious incidents

**Description of Program:** States are required to complete questionnaires (ICAO ADREP Form D and Form P) in which information on investigated accidents and serious incidents to aircraft over a maximum certificated take-off mass of 2250 kg and above are collected. The form contains some 400 data fields, not all of them are applicable to a given occurrence. In addition, States provide information on the factors contributing to the occurrence and a short narrative.

Data reported by States is inserted into a database in ICAO. Based on the information received, ICAO publishes bi-monthly summaries. In addition, ICAO provides a statistical circular base annually. The Air Navigation Commission of ICAO is briefed annually on accident trends based on the analysis of the data received. AIG provides ADREP information for accident prevention purposes to authorized officials in ICAO Contracting States. Annually, some 120 such queries are replied to. ADREP information is analyzed and provided to the relevant Section in respect to all safety related initiatives in ICAO.

Since January 2004, ICAO ADREP is using the ECCAIRS system developed by the European Union to store and analyze its data. This permits States using the same system to report electronically.

The system contains some 32,000 reports from 1970 to today. About 1,000 are added annually.

**Source of Data:** Accident and serious incident investigations in ICAO Contracting States

**Users of Data:** Government safety Organizations in ICAO Contracting States, International Organizations the ICAO Council, the ICAO Air Navigation Commission and the ICAO Secretariat.

**Future Plans for Program** Web based reporting is being developed. In addition, an electronic library of Final Reports is being tested for use by States and the public. Data dissemination to States via the ICAO web is under consideration.

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**Comments:** This database has a comprehensive coverage for air transport category aircraft accidents, however resulting from incomplete reporting, coverage for general aviation as well as for serious incidents varies greatly between States.

## Aviation Safety Monitoring System (ASMS)

**Country/Organization:** New Zealand – Civil Aviation Authority (CAA).

**Voluntary or Mandatory Reporting Program:** Mandatory, with provision for information revealing the identity of the source to be removed if confidentiality is requested.

**Purpose of Program:** To provide the New Zealand aviation community with safety information as determined from accidents and incidents. It is also used to track corrective actions against non-compliances that are detected during proactive surveillance.

**Description of Program:** ASMS is a relational database that links information on aviation document holders with safety failures (occurrences and non-compliances) and tracks corrective actions. ASMS was commissioned in 1991. It is fully integrated with CAA's management information system.

New Zealand's mandatory reporting requirements are prescribed in CAR Part 12 (available on the CAA web site). Part 12 applies to all aircraft accidents and to all serious incidents except those involving various sport and recreational operations. In addition to the notification requirements for accidents and incidents, Part 12 requires the aircraft owner or the involved organisation notifying a serious incident to conduct an investigation to identify the facts relating to its involvement and the causal factors of the incident. A report of the investigation is required within 90 days of the incident, and must include any actions taken to prevent recurrence of a similar incident.

Using a clone of the CAA's system, Aviation Quality Database (AQD), external organisations are able to gather their own occurrence data, track their own audit corrective actions, analyse the data and report their safety performance directly to the CAA via an electronic interface. ASMS and AQD are uniquely compatible in this respect. In practice, only the larger organisations use AQD. Others use CAA's standard reporting form, CAA005.

CAA safety investigators verify occurrence information before releasing it into the ASMS database. They record findings, causes and corrective actions, basing their coding of attributable cause factors on the Reason model. The system facilitates tracking of both internal and external corrective actions.

CAA investigates all reported occurrences to some extent, ranging from a simple desk verification of data in many cases, through to a full field investigation in more serious cases. All accidents and serious incidents are also notified to the independent Transport Accident Investigation Commission (TAIC). TAIC investigates only those accidents and incidents that, in its opinion, have or are likely to have significant implications for transport safety. If TAIC decides to investigate, CAA stands aside.

Various data extraction and compilation tools are used on the ASMS database. The CAA publishes safety reports quarterly and six-monthly. "Occurrence Briefs" are published in the CAA's bi-monthly safety publication, *Vector*. All of these publications are available on the CAA web site, as is a weekly notification of accidents and also full reports on any fatal accidents that CAA investigates.

**Source of Data:** ASMS gathers data from the following sources:

- Occurrence notifications received via AQD or form CA005 and associated safety investigation reports.
- Rule non-compliances revealed from proactive surveillance (audits and spot checks) of the aviation industry.
- Aviation Related Concerns (ARCs) raised by any person.
- Safety Recommendations from TAIC and from Coronial Inquests.

**Users of Data:** Certain information is widely disseminated (see above). The CAA also has a number of risk analysis tools using ASMS data internally in order to target specific operators for special surveillance**.**

ASMS data may provide early identification of the need for safety promotion and education, or the need for targeting of general oversight programs, or for changes to Rules or Standards. It also enables the CAA to be data-driven in its strategic and business planning.

Information received under Part 12 is not used for enforcement action, except in special circumstances such as when false information is supplied or when extreme culpability (recklessness) is revealed.

**Future Plans for Program:** It is proposed to give electronic access to the ASMS database to the Transport Accident Investigation Commission (TAIC).

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**Comments:** The CAA has recently adopted the so-called "Just Culture" approach. This recognizes that in a complex safety system heavily reliant on high standards of compliance with procedures, and high standards of professionalism, accountability for individual actions has an important role to play. By drawing the line at recklessness, the "Just Culture" approach aims to find the balance between the extremes of a punitive system and a blame free environment. In this context, "recklessness" is defined as a conscious disregard of a significant and unjustifiable risk. It is the CAA's view that this model promotes compliance and facilitates learning from mistakes. It has led the major players in the New Zealand aviation industry to adopt a frank and open approach to the CAA in revealing and discussing their safety failures.

## NORDAIDS, LIT/HIT and local systems applied in the Nordic Countries

**Country/Organization:** CAA's of the Nordic Countries, Sweden, Norway, Finland, Denmark, Iceland

**Voluntary or Mandatory Reporting Program:** Mandatory

**Purpose of Program:** Accident/Incident collection, occurrence reporting and analysis system

The legislation in Sweden gives a fully open minded environment, which means that all correspondence concerning deviation reporting in aviation is open as far as it is not a working paper in an on going investigation. Similar legislation is applied in the other Nordic Countries except Denmark.

The reporting willingness is high with few legal actions from findings in investigations.

There are no principal restrictions in exchange of data concerning flight safety with other organisations. A change in legislation in Denmark is guaranteeing a full protection of the reporter against legal blame resulting in high reporting willingness.

**Description of Program:** The NORDAIDS consists of ICAO Annex 13 accidents and incidents from the Nordic Countries i.e. Denmark, Finland, Iceland, Norway and Sweden. It was founded in 1981. The database is running on a joint concept regulated by an agreement between the Nordic Countries.

We have a long experience of data exchange with Canada, USA and Germany and between the Nordic Countries. Experts from our organisations have also taken active part in the development of the ICAO ADREP Standard and the taxonomy for Eurocontrol ATM reporting including use of ECCAIRS with ADREP 2000 standard as a tool.

The outcome from the use of our present data has been very useful and has lead to actions in most aviation safety processes.

The information content is dated from 1970 to present date 2001 covering about 7000 reports, all types of operation except sport activities.

The system also contains data from Canada, USA and Germany, which for the moment is not updated for the last years. The total data volume is around 60 000 reports. All information is defined at present in ADREP-76 standard.

Sweden is also running a deviation reporting system, LIT, covering the latest 5 years of information including all types of operation and ATM occurrences. The data volume is at present about 10 000 reports. The standard used in LIT is not fully ADREP compatible but may give acceptable mapping results to ECCAIRS. Some of the other Nordic Countries are also running reporting systems on a domestic basis.

Analysis is performed on ad hoc requests as well as broad/deep analysis including trends for the yearly planning program and safety seminars to the industry. Evaluations of recommendations from accident/incident investigations are performed.

**Source of Data:** Accident/Incidents from the Nordic Countries, dated from 1970, are collected. Occurrence reporting latest 5 years in Sweden is collected in LIT. External data imported from USA, Canada and Germany is also available in the NORDAIDS database.

**Users of Data:** CAA's in the Nordic countries are front end users. Information is provided within the Authorities and to the industry by regular reports and on request. Limited information is provided to media.

**Future Plans for Program:** The nearest decided action is to convert all data stored in NORDAIDS, LIT and other local systems into ADREP 2000 standard and also to use ECCAIRS 4 as the database concept. The conversion work is planned to start in the beginning of next year.

In connection to the adoption of ECCAIRS it is also decided to create a Work Flow Management system for the administration of investigations, called HIT, in Sweden. The HIT system is working transparently into the ECCAIRS database enhancing the registration and investigation processes.

The Nordic cooperation is continuing within the NORDAIDS Working Group, NWG, with the main objective to create analysis tools, common analysis tasks, training of analysts and administrative matters concerning data exchange within the Nordic Countries and external data sources.

It is highly desirable that the data content of the databases is expanded to contain data not only from Europe but also from other major aviation countries in accordance with earlier procedures.

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## Confidential Human Factors Incident Reporting Programme (CHIRP)

**Country/Organization:** UK - The CHIRP Charitable Trust

**Voluntary or Mandatory Reporting Program:** Voluntary and Confidential
Purpose of Program: CHIRP complements the UK Mandatory Occurrence Reporting Scheme and other formal reporting systems operated by many UK organisations by providing a totally independent, confidential, non-punitive means by which all individuals employed in or associated with the UK air transport and general aviation industries are able to raise safety-related issues of concern without being identified to their peer group, management, or the Regulatory Authority.

**Description of Program:** Reports received through the Programme are validated as far as is possible through a call-back/interview process to ensure that the report contains all relevant information, and reviewed with the objective of making the information as widely available as possible whilst maintaining the confidentiality of the source. Anonymous reports are not normally acted upon, as they cannot be validated. Selected reports are reviewed by an Air Transport Advisory Board, comprised of senior nominees from the principal air transport interests. The role of the Advisory Board is to provide counsel on the most appropriate way in which specific issues might be resolved and to advise the Trustees on the performance of the Programme. Information is provided to the Advisory Board on a confidential basis and all means of identifying the individual reporter are removed from reports prior to any discussion. When appropriate, report information is discussed with relevant agencies with the aim of finding a resolution. Only depersonalised data are used in discussions with third party organisations and the confidentiality of the reporter is assured in any contact with an external organisation. No personal details are retained from reports once they have been actioned and closed; all personal details are returned to the reporter. Each report is allocated a unique reference identification. After the return of personal details, CHIRP is unable subsequently to contact the reporter. The reporter may, if he/she wishes, contact CHIRP for additional information by using the report reference identification.

**Source of Data:** Any individual can report human factors safety related incidents or events involving them self, other people or organisations. Incidents/events can include errors, individual performance, operating/maintenance/support procedures, regulatory aspects or unsafe practices.

**Users of Data:** When appropriate, report information is forwarded to the relevant agency with the aim of having the safety concern assessed and, when appropriate, corrective action taken. In some cases this may be the organisation from within which the report was sourced or, alternatively, the appropriate regulatory authority. Only disidentified data are used in discussions with third party organisations and the confidentiality of the reporter is assured in any contact with an external organisation. Depersonalised data are recorded in a secure database for analysis of key topics and trends. Disidentified data are made available to other safety systems and professional bodies.

CHIRP publishes a quarterly FEEDBACK newsletter containing disidentified reports and comment; this is sent to all commercially licensed pilots, air traffic controllers, engineering personnel and authorised medical examiners, a circulation of around 30,000. FEEDBACK maintains an awareness of Human Factors issues among the flying, air traffic controller and aircraft maintenance communities and provides a forum for discussion. Separate newssheets, entitled GA FEEDBACK and CABIN CREW FEEDBACK, containing reports of particular interest to light aircraft operations/leisure flying and cabin crew are distributed to the respective communities.

**Future Plans for Program:** Extension of the Programme to include safety-related aspects of ramp operations remains the subject of ongoing discussions.

CHIRP is also participating in a UK air transport industry initiative related to the investigation and analysis of maintenance human factors incidents, as required under EASA Part 145. The initiative, which is supported by the UK Civil Aviation Authority, aims to establish a National centralised disidentified database of Maintenance Error Management System (MEMS) data supplied by UK airlines and maintenance organisations on a voluntary basis. An eighteen-month trial involving a number of the principal UK airlines and third-party maintenance organisations has been completed successfully and the programme is now being progressively expanded to include other UK airlines and maintenance organisations.

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## Mandatory Occurrence Reporting Scheme (MORS)

**Country/Organization:** UK – Civil Aviation Authority (CAA).

**Voluntary or Mandatory Reporting Program:** Mandatory, with provision for information revealing the identity of the source to be removed if confidentiality is requested. Voluntary reports are encouraged in respect of those occurrences, which do not fall within the remit of the scheme.

**Purpose of Program:**

1. To provide the UK aviation community with safety information as determined from accidents and incidents.

2. To investigate where necessary and thereafter, when appropriate, to ensure that corrective action is or has been taken, if necessary, either by the reporting organisation or the CAA itself.

**Description of Program:** The primary responsibility for safety rests with the management of the organisations involved (Manufacturers, Operators and Maintenance Organisations). The CAA's responsibility is to provide the regulatory framework within which the industry must work and thereafter to monitor performance to be satisfied that required standards are set and maintained. The Occurrence Reporting Scheme is an established part of the CAA's monitoring function and is complementary to the normal day-to-day procedures and systems (e.g. AOC, Company approvals, etc).

The overall objective of the CAA in operating this scheme is to use the reported information to improve the level of flight safety and not to attribute blame. Mandatory occurrence reporting is made mandatory by Article 117 of the Air Navigation Order 2000. It is administered under the terms of CAP382 "The Mandatory Occurrence Reporting Scheme". The MOR scheme has been running since 1976 and has a total of more than 120,000 records in its associated database.

The Safety Data Unit (SDU) of the Safety Investigation and Data Department (SIDD) of the CAA is responsible for managing the MOR scheme. All reports are sent to the SDU, where they are booked in, assessed and processed. MORs are categorised as Open (for investigation), Closed on Receipt (reportable but not investigated by the CAA) or Grade E (reports which, generally speaking, fall outside the remit of the scheme). Investigations are monitored by specialist departments within the CAA who ensure that appropriate action is being taken as necessary. Occurrences are only "Closed" when the specialist department and the SDU are satisfied that the investigation is complete and all necessary actions have been taken. Closed and Closed on Receipt occurrences can be opened again if further information becomes available which indicates the necessity of doing so. Specific details of all occurrences, including supplementary information and the basis of closure, are entered onto an MOR database.

All MOR reports made to the CAA are circulated within the SRG. The category of any report can be challenged, either by CAA personnel or by the reporter and the report re-categorised. Summaries of all reports are produced on a monthly basis and widely circulated to industry via Monthly Listings. When the SDU identifies potential problems, either by frequency of report or safety risk involved, it will alert the appropriate specialist department. In addition, the SDU carries out specific retrievals of database information on request by legitimate sources and frequent use is made of the database to support safety investigations or resolution of safety problems.

**Source of Data:** MORS gathers data from the following sources:
- Mandatory Occurrence reports.
- Voluntary Occurrence reports.
- Accident reports.

**Users of Data:**

**Internal** - within the CAA for information, investigation and analysis. UK Safety Performance Indicators are presented to a Safety Steering Committee on a quarterly basis, to the CAA Board and are included in the annual report. Annually a Safety Plan is produced. This plan is supported by analysis conducted on data provided by MORS.

**External** – the CAA provides MORS information on a regular basis via reports (such as Monthly Listings). It will also provide information when requested to any persons or organisations that require data for flight safety purposes. Most information provided externally is subject to minor disidentification, unless specific data is justified and available.

**Future Plans for Program:** Efforts are being made to accommodate electronic reporting of incidents as well as electronic dissemination of data.

Reporting methods and procedures is being aligned with Directive 2003/42/EC of the European Parliament and of the Council of 13 June 2003 on occurrence reporting in civil aviation.

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## Accident/Incident Data System (AIDS)

**Country/Organization:** U.S.A./Federal Aviation Administration (FAA)

**Voluntary or Mandatory Reporting Program:** Mandatory

**Purpose of Program:** The FAA Accident/Incident Data System (AIDS) database contains accident and incident data records for all categories of civil aviation. The FAA AIDS differs from the National Transportation Safety Board (NTSB) database in that the FAA participates in accident and incident investigations and collects information in support of the FAA's responsibilities. These responsibilities are to promulgate and enforce Federal Aviation Regulations for certifying civil aircraft airworthiness, for certifying airmen and air carriers for competency, and for certifying airports. This responsibility includes the continued surveillance of the airworthiness of aircraft and competence of airman, air agencies, commercial operators, and air carriers, and the safety of airports. The NTSB is an independent Federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in the other modes of transportation -- railroad, highway, marine and pipeline -- and issuing safety recommendations aimed at preventing future accidents. The Safety Board determines the probable cause of all U.S. civil aviation accidents and certain public-use aircraft accidents.

**Description of Program:** The FAA issues a separate report for each aircraft involved in an aviation accident or incident. The AIDS database contains records of events that occurred between 1973 and the present.

**Source of Data:** Accident and incident investigations of civil aircraft in accordance with Title 49 United States Code.

**Users of Data:** FAA, NTSB, and the aviation community.

**Future Plans for Program:**

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## Air Transportation Oversight System (ATOS)

**Country/Organization:** United States/FAA

**Voluntary or Mandatory Reporting Program:** Mandatory

**Purpose of Program:** ATOS is designed to identify safety trends in order to spot and correct problems at their root cause before an accident occurs.

**Description of Program:** The Air Transportation Oversight System (ATOS) was implemented in 1998 as a new approach to FAA certification and surveillance oversight, using system safety principles and systematic processes to assure that air carriers are in compliance with the Federal Aviation Administration regulations and have safety built into their operating systems. Unlike the traditional oversight methods, ATOS incorporates the structured application of new inspection tasks, analytical processes, and data collection techniques to the oversight of individual air carriers. This approach enables Flight Standards inspectors to be more effective in the oversight of air carriers by focusing on the most critical safety aspects of an air carrier's operation. As currently applied, ATOS provides a systematic process for conducting surveillance, identifying and dealing with risks, and providing data and analysis to guide the oversight of each carrier. Under ATOS, an air carrier's operations have been separated into 7 systems, 15 subsystems, and 96 underlying component "elements" which provide the structure for conducting surveillance, collecting data, and identifying risks or areas of concern.

- Reporting Form Used: The information is entered into the database directly using the Internet.
- Period of Reporting: 1998 to Present
- Approximate number of records: 45,000
- Are Reports De-identified: No

**Source of Data:** Aviation Safety Inspectors (ASI) enter the results of their surveillance activities directly into the ATOS Data Base using the Internet. An activity report is generated each time an ASI conducts a surveillance of an Air Carrier.

**Users of Data:** FAA Flight Standards Inspectors, Flight Standards Managers, Supervisors, and Analyst

**Future Plans for Program:** The ATOS Data Base is presently being enhanced to incorporate requirements generated by the users of the system.

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## Aviation Accident/Incident Database

**Country/Organization:** U.S.A./National Transportation Safety Board (NTSB)

**Voluntary or Mandatory Reporting Program:** Mandatory

**Purpose of Program:** The NTSB is an independent Federal agency charged by Congress with investigating every civil aviation accident in the United States. Representatives from numerous Federal, State and Local authorities as well as various segments of the industry usually participate in the investigation of major accidents. The NTSB determines the probable cause of accidents and issues safety recommendations aimed at preventing future accidents.

**Description of Program:** The NTSB accident/incident database is the official repository of aviation accident data and causal factors. In the NTSB database, an event is classified as an accident or an incident. "Aircraft accident" means an occurrence associated with the operation of an aircraft, which takes place between the time any person boards the aircraft with the intention of flight and the time that all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage. The NTSB defines "Incident" to mean an occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations.

**Source of Data:** Data is obtained using a pilot accident report (Form 6120.1) and investigator entries into a computer-based system. Preliminary accident reports are completed within 10 working days of the event and a factual report with additional information concerning the occurrence is available within a few months. A final report, which includes a statement of the probable cause, may not be completed for months after the investigation has been completed (it is not uncommon for the investigation of major accidents to require a year or more). Preliminary reports contain only a few data elements; i.e., date, location, aircraft operator, type of aircraft, etc. (they function as placeholders until the Factual and Final reports are entered into the database).

**Users of Data:** NTSB, FAA, Aircraft Manufacturers, Airlines, Media, Academia, Public, and other government organizations**.**

**Future Plans for Program:** Beginning in January 2001, NTSB revised the accident database software structure and the data input program used by investigators. Future changes will constitute refinements to that Accident Data Management System (ADMS). The system will accommodate pilot reporting of an accident using a web-based form by Fall of 2004. There are also plans to improve the query capabilities of database provided on the NTSB web site.

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## Aviation Safety Action Programs (ASAP)

**Country/Organization:** United States/FAA

**Voluntary or Mandatory Reporting Program:** Voluntary Reporting

**Purpose of Program:** The ASAP is intended to encourage employees of airlines and certificated repair stations to voluntarily report alleged regulatory violations and safety related events. The information is used to take non-punitive corrective action in individual cases, and to correct systemic problems.

**Description of Program:** Based on a memorandum of understanding with the FAA, the disposition of reports is determined through consensus by an event review committee consisting of one representative from the FAA, company management, and labor. Reports of events accepted under the program are subject to FAA administrative action, or to no action, in lieu of enforcement action. To be accepted under the program, alleged regulatory violations must be inadvertent, and must not appear to involve intentional disregard for safety, criminal activity, substance abuse, controlled substances, alcohol, or intentional falsification. De-identified safety related information from ASAP reports is distributed to airline departments for corrective action as required, and a database of ASAP events is maintained by the airline.

**Source of Data:** Employee reports from flight crewmembers, mechanics, flight attendants, and dispatchers of certain air carriers and repair station certificate holders.

**Users of Data:** Air Carriers, Federal Aviation Administration (Flight Standards, Aircraft Certification, Air Traffic), and labor association professional standards groups. ASAP data shared with the FAA is protected from public release by a FAA Order issued under 14CFR Part 193.

**Future Plans for Program:** Many air carriers plan to integrate information from ASAP with FOQA on a company internal basis. Under a government funded initiative entitled Integrated Flight Quality Assurance (IFQA), the FAA will make hardware and software available to any US operator, which will enable electronically secure sharing of aggregate ASAP and FOQA information between participating airlines, as well as with the FAA. It is currently proposed that NASA Ames provide a capability for querying aggregate FOQA data maintained by multiple participating operators, with expansion thereafter to include query of ASAP data.

**Point of Contact:**

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**Comments:** ASAP can provide information that may otherwise be unobtainable, and yield valuable insights into the causality from an employee perspective of adverse safety events.

## Aviation Safety Hotline

**Country/Organization:** United States – Federal Aviation Administration (FAA)

**Voluntary or Mandatory Reporting Program:** Voluntary and Confidential/Anonymous

**Purpose of Program:** The Hotline is a real-time safety program that operates 24 hours a day, 7 days a week, to receive and respond to reports by toll-free telephone about potential safety problems that warrant immediate correction.

**Description of Program:** Hotline calls requiring rapid intervention are immediately referred to the FAA office with geographic jurisdiction for an appropriate response. For example, hotline calls have resulted in FAA action to stop the dispatch of an airplane based upon a call from a mechanic that an airplane was not ready to fly, or a call that a pilot going to the airplane did not appear to be sober.

**Source of Data:** Anyone can submit a report via toll-free (1-800) telephone. The reporter has three options: remaining anonymous, providing a name but requesting confidentiality, and providing a name without requesting confidentiality. The Hotline currently receives more than 2000 reports per year.

**Users of Data:** The FAA uses Hotline information to take immediate action in response to potential safety concerns.

**Future Plans for Program:** The FAA is planning to re-engineer the hotline. The re-engineering effort will add the ability to accept reports via the Internet that do not require immediate intervention.

**Point of Contact:**

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- Business (not Hotline) Phone: 202-267-9215
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## Aviation Safety Reporting System (ASRS)

**Country/Organization:** United States – Federal Aviation Administration (FAA) and National Aeronautics and Space Administration (NASA)

**Voluntary or Mandatory Reporting Program:** Voluntary and Confidential

**Purpose of Program:** The ASRS collects, analyzes, and issues alerts and other information about voluntarily submitted aviation safety reports, in an effort to reduce the likelihood of aviation accidents and incidents. ASRS data are used to identify deficiencies and discrepancies, and to support policy formulation and planning.

**Description of Program:** The ASRS was established in 1975 under an agreement between the FAA and NASA. The FAA provides most of the funding and NASA administers the program.

All reports are read by subject matter experts. If a hazard is identified that warrants quick attention, ASRS sends an alerting message to the appropriate industry or government entity that can best address the issue. The reports are also examined and classified to help identify causal factors. ASRS de-identifies all reports before entering them into the database in order to maintain confidentiality.

**Source of Data:** Reports are submitted by pilots, air traffic controllers, mechanics, flight attendants, and others involved in aviation operations when they are involved in, or observe, a situation in which aviation safety was or could have been compromised. An incentive to reporting is that, with some exceptions, the FAA will not take enforcement action against a person who submits a report in relation to the occurrence about which the report was submitted. ASRS currently receives more than 3,000 reports a month.

**Users of Data:** Information in the ASRS database (de-identified) is available to the general public on the Internet from the FAA and from ASRS upon request. When individuals and organizations contact ASRS directly, ASRS staff conducts a search and mails the results to the requestor.

**Future Plans for Program:** After a problem has occurred, the ASRS program provides good information about whether the problem has occurred before, as well as quick feedback to show whether remedies are effective. FAA and NASA are now undertaking a major redesign of ASRS, with the help of the aviation community, in order to make it more proactive, as many of the airline-operated safety programs are, in an effort to improve the capability of ASRS to help prevent problems from occurring.

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## Flight Operational Quality Assurance (FOQA)

**Country/Organization:** United States/FAA

**Voluntary or Mandatory Reporting Program:** Voluntary Reporting

**Purpose of Program:** Digital flight data from flight operations is routinely extracted and analyzed to identify exceedences in individual flights, and adverse safety trends within and across airline fleets. The information is used to take non-punitive corrective action in individual cases, and to correct systemic problems.

**Description of Program:** Digital flight data is reviewed by an airline exceedence monitoring team comprised of representatives from company management and labor. If contact with an individual flight crew is needed to follow-up on FOQA data, a representative from labor accomplishes the contact. Information on FOQA trends is distributed to airline fleet managers, and to other company departments as appropriate. Under 14CFR 13.401, the FAA does not use information obtained from an approved FOQA program for enforcement purposes, except for deliberate or criminal acts. Airlines seeking enforcement protection must submit a FOQA Implementation and Operations Plan, which stipulates that the airline will take corrective action for adverse safety trends, identified in FOQA data, and inform the FAA of that action. 14 CFR 13.401 requires that operators with approved programs provide the FAA with aggregate FOQA data in a form and manner acceptable to the FAA Administrator.

**Source of Data:** Aircraft Digital Flight Data Recorder (DFDR)

**Users of Data:** Air Carriers, Federal Aviation Administration (Flight Standards, Aircraft Certification, Air Traffic), and labor association professional standards groups. FOQA data shared with the FAA is protected from public release by a FAA Order issued under 14CFR Part 193.

**Future Plans for Program:** Many air carriers plan to integrate information from ASAP with FOQA on a company internal basis. Under a government funded initiative entitled Integrated Flight Quality Assurance (IFQA), the FAA will make hardware and software available to any US operator, which will enable electronically secure sharing of aggregate ASAP and FOQA information between participating airlines, as well as with the FAA. It is currently proposed that NASA Ames provide a capability for querying aggregate FOQA data maintained by multiple participating operators, with expansion thereafter to include query of ASAP data.

**Point of Contact:**

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- http://www.asy.faa.gov/gain/FOQA_&_ASAP/FOQA_&_ASAP_Information.htm

**Comments:** FOQA data is unique because it can provide objective information that is not available through other methods. The information and insights provided by FOQA can improve safety by significantly enhancing training effectiveness, operational procedures, maintenance and engineering procedures, and air traffic control procedures.

## Near Midair Collision System (NMACS)

**Country/Organization:** United States/FAA

**Voluntary or Mandatory Reporting Program:** Voluntary Reporting

**Purpose of Program:** Information obtained from NMAC reports is used to develop programs, policies and procedures to reduce NMAC occurrences, thereby enhancing the safety and efficiency of the air transportation system.

**Description of Program:** The Near Midair Collision System (NMACS) database is used to record reports of in-flight incidents where two aircraft have converged to an unsafe distance but avoided an actual collision. The unsafe distance or operating condition judgment is solely at the determination of one or more aircrew members or passenger that a possible midair collision could have occurred or whenever a separation of less than 500 feet was observed while in flight. The NMAC database includes description of the incident, setting, weather, intended and actual operations, evasive actions (if any) taken, location, flight profile, flight conditions, aircraft and aircrew data for the two aircraft involved in the reported NMAC.

**Source of Data:** Preliminary pilot-reported reports (submitted by Air Traffic) and investigative reports submitted by FAA Flight Standards Inspectors.

Reporting Form Used: FAA Form 8020-21, Preliminary Near Midair Collision Report, and FAA Form 8020-15, Investigation of Near Midair Collision Report.

Approximate Number of Reports: Over 5,200 through the end of CY2003.

**Users of Data:** Air Traffic, Flight Standards, Media, Analysts, and various other individuals/groups.

**Future Plans for Program:** A web-based application, Air Traffic Quality Assurance, was developed and deployed to air traffic for the electronic collection of incident reports. ATO-A is currently working with Flight Standards and Airports in order to electronically collect investigative reports.

**Point of Contact:**

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## Operational Error/Deviation System (OEDS)

**Country/Organization:** United States/FAA

**Voluntary or Mandatory Reporting Program:** Mandatory Reporting

**Purpose of Program:** The FAA uses the mandatory OEDS to determine if the actions of a controller resulted in:

1. Less than the applicable separation minima between two or more aircraft or between an aircraft and terrain or obstacles as required by FAA Order 7110.65

2. An aircraft landing or departing on a runway closed to aircraft operations after receiving air traffic authorization.

**Description of Program:**

- Reporting Form Used: FAA Form 7210-2, Preliminary Operational Error/Deviation Report, and FAA Form 7310-3, Final Operational Error/Deviation Report.
- Period of Reporting: 1985 to Present.
- Approximate Number of Reports: Over 23,000 through the end of CY2003.
- Are Reports De-identified: No.

**Source of Data:** Operational Error/Deviation reports are submitted by Air Traffic Control Facilities.

**Users of Data:** Air Traffic, Media, Analysts, and various other individuals/groups.

**Future Plans for Program:** A web-based application, Air Traffic Quality Assurance, was developed and deployed to air traffic for the electronic collection of incident reports. ATO-A is currently working with Flight Standards and Airports in order to electronically collect investigative reports.

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## Pilot Deviation System (PDS)

**Country/Organization:** United States/FAA

**Voluntary or Mandatory Reporting Program:** Mandatory Reporting

**Purpose of Program:** The FAA uses the mandatory Pilot Deviation reporting system to determine if the actions of a pilot violated a Federal Aviation Regulation (FAR) or a North American Aerospace Defense Command (NORAD).

**Description of Program:**

- Reporting Form Used: FAA Form 8020-17, Preliminary Pilot Deviation Report, and FAA Form 8020-18, Investigation of Pilot Deviation Report.
- Period of Reporting: 1987 to Present.
- Approximate Number of Reports: Over 33,000 through the end of CY2003.
- Are Reports De-identified: No.

**Source of Data:** Air Traffic Controllers submit Preliminary PD reports and investigations of preliminary reports are submitted by Flight Standards Investigators.

**Users of Data:** Air Traffic, Flight Standards, Media, Analysts, and various other individuals/groups.

**Future Plans for Program:** A web-based application, Air Traffic Quality Assurance, was developed and deployed to air traffic for the electronic collection of incident reports. ATO-A is currently working with Flight Standards and Airports in order to electronically collect investigative reports.

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**Comments:** The database information gives a good account of what happened, but is not useful for getting at the root cause of pilot deviations.

## Safety Performance Analysis System (SPAS)

**Country/Organization:** United States (U.S.)/Federal Aviation Administration (FAA)

**Voluntary or Mandatory Reporting Program:** All Flight Standards Service (AFS) inspectors are required to use SPAS in the performance of their duties**.**

**Purpose of Program:** The SPAS application exists because the FAA determined that inspectors, analysts, and managers needed a single, comprehensive, and integrated source of critical safety information that would enable them to quickly identify safety risks and focus inspector resources on areas of greatest priority. SPAS provides FAA/Department of Defense (DOD) decision makers with rapid access to a wide variety of formatted information needed to make timely oversight decisions and address hazards and risks before accidents occur. SPAS directly supports the FAA and the Associate Administrator for Regulation and Certification (AVR) goals and objectives for reducing aviation accidents.

**Description of Program:** SPAS is an Intranet-based application that is hosted on a secure, network enterprise. This environment contains a series of almost forty integrated databases and data processing utilities that acquire, maintain, and distribute information from a variety of external sources.

SPAS is the FAA's primary source of comprehensive, integrated safety information that is used by the AVR and AFS inspectors, analysts, and managers in developing and adjusting field surveillance, investigation, and other oversight programs. The SPAS program interfaces with key oversight programs, such as the National Program Guidelines (NPG), the Air Transportation Oversight System (ATOS) and the Surveillance and Evaluation Program (SEP), and other government and industry sources, to collect performance and operational data, analyze and summarize the data, and provide critical information in the form of graphs, tables, and reports.

This information is used to:

1. Identify safety hazards and risk areas;
2. Target inspection efforts and resources for air operators, repair stations, schools, and airmen to areas of greatest risk; and
3. Monitor the effectiveness of targeted oversight actions.

**Source of Data:**

SPAS provides access to and uses information from the following databases:

**FAA**

| | |
|---|---|
| AIDS | Accident Incident Database System |
| ADS | Airworthiness Directives Subsystem |
| AD, AD Preamble, AD NPRM | Airworthiness Directive |

| | |
|---|---|
| Aircraft (MSAT-B) | Aircraft (Multi System Access Tool-B) |
| Aircraft-Engine Combinations | Aircraft-Engine Combinations |
| Airman (MSAT-A) | Airman (Multi System Access Tool-A) |
| ASAP | Aviation Safety/Accident Prevention System |
| ATOS | Air Transportation Oversight System |
| CAIS | Comprehensive Airmen Information System |
| EIS | Enforcement Information System |
| MMELS | Master Minimum Equipment List System |
| New Entrant | New Entrant Air Carrier |
| NPTRS | National Program Tracking and Reporting Subsystem |
| NVIS- Air Operator | National Vital Information Subsystem – Air Operator |
| NVIS- Air Agency | National Vital Information Subsystem - Air Agency |
| NVIS- Check Airman | National Vital Information Subsystem - Check Airman |
| NVIS- Designee | National Vital Information Subsystem - Designee |
| NVIS- Environmental | National Vital Information Subsystem - Environmental |
| NVIS- Historical Fleet | National Vital Information Subsystem - Historical Fleet |
| NVIS- Historical Personnel | National Vital Information Subsystem - Historical Personnel |
| SDRS | Service Difficulty Reporting Subsystem |
| Utilization | Air Carrier Aircraft Utilization and Propulsion Reliability System |

**DOD**

| | |
|---|---|
| Cockpit | DOD Cockpit Observations |
| Q & S | DOD Quality and Safety |
| Ramps | DOD Ramp Inspections |
| SPERS | DOD Survey and Performance Evaluation Resource System |

**EXPERIAN**

| | |
|---|---|
| Credit Rating | Experian Intelliscore Credit Rating |

**DOT**

| | |
|---|---|
| Form 41 Traffic | DOT Bureau of Transportation Statistics |

**NTSB**

| | |
|---|---|
| NTSB | National Transportation Safety Board |

**Users of Data:** More than 5,000 FAA and DOD inspectors, mangers, analysts, and contractors have the ability to access SPAS worldwide, 24 hours a day.

**Future Plans for Program:** Since SPAS was initially deployed, the system has been continually expanded and enhanced to meet the evolving needs of the FAA and user community. New functions are incorporated after being defined by expert representatives of the user community, and approved by program management.

As information technology changes, we believe that SPAS could be enhanced to support system safety and allow authorized users to customize how safety information is presented based upon user-defined criteria. Additionally, we are exploring ways to make SPAS information available to the general public.

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**Comments:** SPAS is not a database in the sense that data is entered into it. It replicates the data from many databases, and then performs calculations on that data to provide meaningful information and/or reports to authorized users.

## Service Difficulty Reporting System (SDRS)

**Country/Organization:** U.S.A./Federal Aviation Administration (FAA)

**Voluntary or Mandatory Reporting Program:** Voluntary and Mandatory

**Purpose of Program:** The FAA SDRS database contains records of mechanical malfunctions, defects, and failures on civil aviation aircraft. The aviation community submits these reports to the FAA whenever a system, component, or part of an aircraft, powerplant, propeller, or appliance fails to function in a normal or usual manner. SDRS data assists the FAA in achieving prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products. FAA managers and inspectors also use SDRS data to measure the effectiveness of the self-evaluation techniques being employed by certain segments of the civil aviation industry.

**Description of Program:** Established in 1966, the SDRS is a global data exchange system that provides an effective method of communication between the FAA and the aviation community concerning in-service or operational problems. The reports submitted are known by a variety of names: SDRs, Malfunction and Defect Reports (M or D) and Mechanical Reliability Reports (MRR). FAA certificated air carriers, commercial air operators, and repair stations are required to submit reports in accordance with Title 14, Code of Federal Regulation (CFR) sections 121.703, 125.409, 135.415, and 145.221; while the general aviation community submits reports voluntarily. The Aviation Data Systems Branch, AFS-620 receives, processes, and stores all of these reports. Individual reports may be submitted via the Internet web site at: <http://av-info.faa.gov/isdr/>.

**Source of Data:** U.S. air carrier and general aviation community; and various international civil aviation authorities for such countries as Canada and Australia.

**Users of Data:** FAA, National Transportation Safety Board, and the aviation community.

**Future Plans for Program:** Continue the coordination to gain global standardization of the SDR reporting requirements.

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- **Comments:**

## Vehicle/Pedestrian Deviation System (VPDS)

**Country/Organization:** United States/FAA

**Voluntary or Mandatory Reporting Program:** Mandatory Reporting

**Purpose of Program:** The FAA uses the mandatory Vehicle/Pedestrian Deviation reporting system to track entries or movements on airport movement areas by a vehicle operator or pedestrian that has not been authorized by air traffic control (including aircraft operated by a non-pilot).

**Description of Program:**

- Reporting Form Used: FAA Form 8020-24, Preliminary Vehicle/Pedestrian Deviation Report, and FAA Form 8020-25, Investigation of Vehicle/Pedestrian Deviation Report.
- Period of Reporting: 1988 to Present.
- Approximate Number of Reports: Over 5,400 through the end of CY2003.
- Are Reports De-identified: No.

**Source of Data:** Air Traffic Controllers submit Preliminary VPD reports and investigations of preliminary reports are submitted by Airport Safety Inspectors.

**Users of Data:** Air Traffic, Airports, Media, Analysts, and various other individuals/groups.

**Future Plans for Program:** A web-based application, Air Traffic Quality Assurance, was developed and deployed to air traffic for the electronic collection of incident reports. ATO-A is currently working with Flight Standards and Airports in order to electronically collect investigative reports.

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