

International Road Research Documentation (IRRD)

*A Cooperative Worldwide Database of
Information on Road Transport*

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Since its inception in 1965, the mission of International Road Research Documentation (IRRD) has been to facilitate the sharing of research and experience worldwide by collecting, coordinating, and disseminating information of interest to engineers, managers, researchers, educators, and others working in the road and road transport sectors. The references contained in IRRD, which include an informative abstract, originate from research reports, books, journal articles, reviews, theses, standards and specifications, and conference proceedings. A second type of reference is based on research in progress. Overlap and reinventing of the wheel can perhaps be avoided and new ideas and technologies made accessible on a timely basis through the sharing of research and experience made possible by IRRD.

The IRRD computerized database has been in existence since 1972. Since that time, continual efforts have been made to improve and enhance the services offered by IRRD. More than 300,000 scientific references are now available electronically in the IRRD database through a number of complementary and accessible channels.

International Cooperative Venture

IRRD is open to all countries, institutions, and professional users. Presently, the following countries are active Members of the IRRD scheme: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Japan, Norway, Spain, Sweden, Switzerland, The Netherlands, the United Kingdom, and the United States. Brazil, Colombia, the People's Republic of China, and Saudi Arabia are Associate Members, and several other Latin American countries are expected to join the scheme in the near future.

IRRD therefore really does give the user a good idea of what is going on in the rest of the world. Each participating country is represented by an institute, or national IRRD center, and some countries have also designated additional institutes. Participating countries and institutes cooperate to maintain and continually improve the database. Input to the database is provided by the 31 renowned institutes participating in the cooperative system. Information included is of high quality, and has scientific and technological relevance at the international level.

Multilingual Input and Database

Each national center is responsible for scanning and abstracting material published in its own country and entering the information in one of the IRRD languages: English (80 percent), French (10 percent), or German (10 percent), and, on a trial basis since 1994, Spanish. The database is updated monthly with abstracts of new publications. The progress of ongoing research projects is reported at least every 3 years, and descriptions of new research are added as they become available. Of the database references, 80 percent relate to publications and 20 percent to research projects. Approximately 12,000 references are added each year. Figure 1 shows the IRRD information flow.

Coordination of data input is ensured by linguistic centers: Bundesanstalt für Strassenwesen (BASt, Bergisch-Gladbach, Germany) for German, Laboratoire Central des Ponts et Chaussées (LCPC, Paris, France) for French, and Transport Research Laboratory (TRL, Crowthorne, England) for English. The Spanish input is undertaken by Centro de Estudios y Experimentacion de Obras Publicas (CEDEX, Madrid, Spain). It is expected that in the future, CEDEX will act as the fourth IRRD coordinating center for the Spanish-speaking countries that are likely to join the scheme.

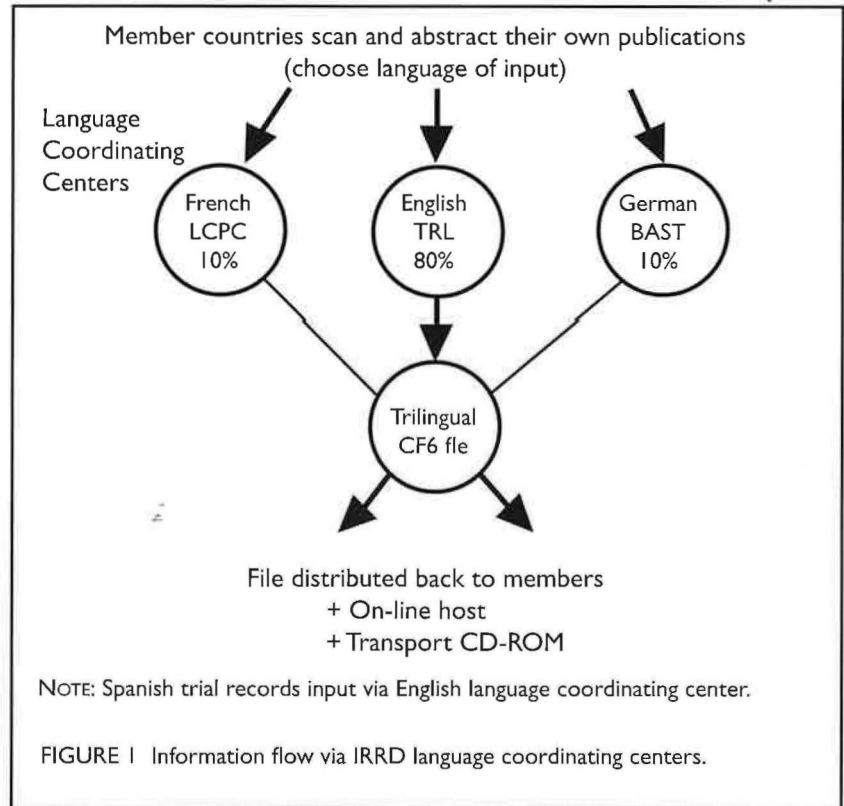
Subjects/Fields Covered

The primary aim of IRRD Members is to provide information of relevance to all potential users worldwide. Data collected are not necessarily limited to national coverage. Specialists from IRRD participating institutes select and ensure continuous screening of new publications and research on roads and road transport. Hence, the IRRD scheme offers comprehensive coverage of the road and road transport fields (see box page 13) and is constantly updated to cover new developments. Increasingly, subjects such as the environment and forms of land transport other than road are being included.

No Language Barrier

Though IRRD is multilingual, one need not be a linguist to retrieve those records not in one's native language. Each of the records in the database is indexed with keyword terms from the IRRD thesaurus. The various language versions of these terms are linked by a single four-digit code (in the case of the subject classification, a two-digit code). Thus even if one is not sure of the proper terminology in a particular language, one can find the appropriate code by locating a record using a familiar language and displaying the keywords (DE field on the TRANSPORT CD-ROM, CT field on the Scientific and Technical Information Network [STN] IRRD file). This procedure enables one to retrieve publications with that code, but with abstract and keywords in one of the other languages. In the newly launched STN on-line version of IRRD, the non-English records will include the English version of the keywords along with the original French, German, or Spanish keywords.

An example IRRD record illustrating the above features is provided on the facing page. This example was downloaded from the TRANSPORT CD-ROM database.



Transport Research Laboratory

TRL is the largest and most broadly based center for transport research in the United Kingdom. Established in 1933 as part of the Government's Department for Scientific and Industrial Research, it has a long history of conducting research to address transport-related issues.

In April 1996, as part of the government's privatization policy, the Department of Transportation transferred ownership of TRL to the Transport Research Foundation—a nonprofit distributing company limited by guarantee and continuing to trade as TRL. The foundation is supported by more than 80 members drawn from professional institutions, universities, the transport industry, consultants, contractors, and government, so it is not aligned with any commercial interests and continues to provide independent and impartial advice.

The TRL staff currently includes more than 300 scientists and engineers in all areas of the transport sector, from highway engineering, to driver behavior, to environmental issues, to road safety. In addition to working in the United Kingdom, TRL has extensive experience overseas, and in the last 3 years has carried out projects in more than 50 countries. More information about

IRRD Subject Coverage

Traffic and transport: passenger transport, public transport, freight transport, traffic techniques, traffic management, traffic surveys, social and environmental issues

Road safety, accidents: accident statistics, accidents and the road, road safety equipment, road user behavior, road user education, alcohol and drugs, injuries, fatalities

Vehicles: design and safety, comfort, vehicle inspection and control, operation and maintenance, impact on environment

Roads and pavements, bridges, tunnels: geometric design, layout, drainage, frost, construction methods, equipment, environmental impact, maintenance methods, equipment, winter maintenance

Materials: bituminous materials, concrete, aggregates, stabilized materials, steel, metals, plastics, and others

Soils and rocks, geotechnics: soil and rock mechanics, soil and rock properties

Administration and economics: road and transport statistics, forecasts, financing, programming

Environment: all traffic- and road-related environmental issues

Example: Search on Traffic Calming

An initial search using the phrase "traffic calming" found more than 400 (English) abstracts. After the results of the initial search were displayed, some or all of the following keywords (and associated codes) could be identified by examining the DE field:

Subject categories (codes in parentheses):
traffic and transport planning (72)
or traffic control (73)
or accidents and the road (82)

Keywords (codes in parentheses):
speed control (struct elem) (2833)
or residential area (0307)
or traffic restraint (0633)
or town centre (0311)

The following are some of the non-English records obtained by repeating the search combining the appropriate codes.

SB: IRRD-OECD
TI: VERKEHRSTECHNISCHE
LOESUNGSMOEGLICHKEITEN.
AU: RETTENBACHER-P
SO: KINDERSICHERE GEMEINDE. 1995/09.
pp36-46
PB: KURATORIUM FUER
VERKEHRSSICHER- HEIT (KFV), LAN-
DESSTELLE SALZBURG,
ZILLNERSTRASSE 18, SALZBURG, A-5021,
OESTERREICH
PY: 1995
LA: DEUTSCH

AB: In den Jahren 1990 bis 1994 ereigneten sich im Bundesland Salzburg mehr als zwei Drittel der Kinderunfaelle im Ortsgebiet. Ein massgeblicher Unfallfaktor ist die Fahrgeschwindigkeit. Von der Fahrgeschwindigkeit haengen Reaktions- und Bremsweg, Verletzungsrisiko anderer Verkehrsteilnehmer und die Konzentrationszone des Fahrzeuglenkers ab. Bei hoher Fahrgeschwindigkeit ist aufgrund des verlaengerten Anhalteweges die Konzentrationszone des Fahrzeuglenkers auf Entfernung hin ausgerichtet. Bei niedrigem Tempo geht die Konzentrationszone in die Breite und nicht in die Ferne. Der Fahrzeuglenker kann so das Geschehen im unmittelbaren Umfeld seines Fahrzeuges erkennen. Durch verkehrorganisatorische, strassenbauliche und gestalterische Massnahmen kann einerseits die Fahrgeschwindigkeit reduziert und andererseits die Aufmerksamkeit des Fahrers erhoehet werden. Die raeumlichen Schwerpunkte von Massnahmen zur Geschwindigkeitsverminderung im Ortsgebiet sind die Ortseinfahrt, die Ortsdurchfahrt, der Ortskern und die Wohngebiete. Zu diesen raeumlichen Schwerpunkten werden verschiedene verkehrstechnische Moeglichkeiten zur Geschwindigkeitsreduktion erlaeuert.

(Siehe auch IDS-Nummer 335240). (KfV/H).
DE: GESCHWINDIGKEIT-; 5408-; REAK-
TIONSV ERHALTEN-; 1785-; BREMSWEG-;
1695-; AUFMERKSAMKEIT-; 2238-;
FAHRER-; 1772-; UNFALLVERHUETUNG-;
1661-; GESCHWINDIGKEITSMINDERUNG-
BAULICHE-ELEMENTE; 2833-; GEBIET-;
0378-; WOHN GEBIET-; 0307-; UNFALL-;
1643-; STATISTIK-; 6555-; KIND-; 1758-;
OESTERREICH-; 8007-; STRASSEN-
VERKEHRSTECHNIK-; 0657-
SC: UNFALL-UND-STRASSE (82); UNFALL-
UND-MENSCH (83)
AN: 335245
UD: 199608
CN: 9704KV041D

SB: IRRD-OECD
TI: TRAFFIC CALMING IN URBAN CORE
AREAS IN FLANDERS - PROBLEMS AND
PERSPECTIVES. (AUTOLUWE BINNENSTE-
DEN IN VLAANDEREN - PROBLEMEN EN
PERSPECTIEVEN.)
AU: BROECKAERT-M (BELGISCH INSTI-
TUUT VOOR DE VERKEERSVEILIGHEID);
PELCKMANS-J (BELGISCH INSTITUUT
VOOR DE VERKEERSVEILIGHEID)
SO: COLLOQUIUM VERVOERSPLANOLO-
GISCH SPEURWERK 1996. BEHEERSBARE
MOBILITEIT: EEN UTOPIE? ROTTERDAM,
28-29 NOVEMBER 1996. DEEL II. 1996.
pp437-53 (15 Refs.)
PB: COLLOQUIUM VERVOERSPLANOLO-
GISCH SPEURWERK, LEGMEERSTRAAT
62/2H, AMSTERDAM, 1058 NG, NETHER-
LANDS
PY: 1996
LA: DUTCH
AB: Nearly all cities in Flanders incorporated several years ago measures to reduce car traffic in the urban core zones. In this paper an overview is given of the tools for local traffic policy. The 30 km/h speed limit zones, as most recommended regime for urban core areas, are treated critically. Attention is paid to the competence and the interrelations of the different public authorities' levels. The tools and organizational structures that should be modified in order to realize more efficiently car traffic reduction in urban core areas are also described. It is recommended, for instance, to realize a modified public transport organization structure in which local authorities can play an important role. For the covering abstract of the conference see IRRD 887581.
DE: CONFERENCE-; 8525-; TOWN-CEN-
TRE; 0311-; TRAFFIC-RESTRAINT; 0633-;
CAR-; 1243-; DECREASE-; 9009-; SPEED-
CONTROL-STRUCT-ELEM; 2833-; POLICY;
0143-; PUBLIC-TRANSPORT; 1165-; LOCAL-

AUTHORITY; 0151-; TRANSPORTMODE;
1145-; SAFETY-; 1665-; TRAFFIC-REGULA-
TIONS; 1544-; MODIFICATION-; 9048-;
BELGIUM-; 8008-
SC: TRAFFIC-AND-TRANSPORT-
PLANNING (72); TRAFFIC-CONTROL (73)
AN: 887607
UD: 199608
CN: 9702SW027E

SB: IRRD-OECD
TI: THE EFFECTS OF TRAFFIC CALMING
MEASURES ON THE DYNAMICS OF A
VEHICLE. (TIEN RAKENTEELLISTEN
HIDASTIMIEN VAIKUTUS AJODYNAMI-
IKKAAN.) AU: HUTTUNEN-I (HELSINKI
UNIVERSITY OF TECHNOLOGY)
SO: TIELAITOKSEN SELVITYKSIA. 1995. 60
(TIEL 3200335) 65P+14P APP (80 Refs.)
PB: TIELAITOS (FINNISH NATIONAL
ROAD ADMINISTRATION), OPASTINSILTA
12 A, HELSINKI, FIN-00520, FINLAND
PY: 1995
IS: 0788-3722
RN: 951-726-129-2
LA: FINNISH
LS: ENGLISH
AB: The aim of traffic calming devices is to decrease speeds used by drivers to the degree that they do not exceed acceptable speed levels. The slowing down effect of the calming devices is based on their detrimental effect on the driving comfort when the speed of the vehicle exceeds the desired level. Single calming devices or devices placed too far apart are only effective at one point. The best traffic calming solution is one that produces speeds over the entire stretch of road. Constant speed also decreases emissions caused by repeated deceleration and acceleration. Traffic calming devices are road humps, narrowings and horizontal deflections (chicanes). Roundabouts can also be used for the purpose. This study focuses on the effects of structural traffic calming devices on the dynamics of vehicles. Dynamic properties are speed, acceleration and deceleration. This study consists of a literature section and a field study section. The methods employed were radar, traffic impedance analysis and recording on video. Field measurements were made at twelve locations in various parts of Finland.
DE: TRAFFIC-RESTRAINT; 0633-; SPEED-
CONTROL-STRUCT-ELEM; 2833-; FIN-
LAND; 8035-; ACCELERATION-; 5405-;
DECELERATION-; 5416-
SC: TRAFFIC-CONTROL (73)
AN: 876046
UD: 199611
CN: 9606TT013E

TRL's current activities and publications can be found at the TRL Web site: <<http://www.trl.co.uk>>.

The core services provided by the TRL Library to both internal researchers and the public are closely linked to TRL's in-house databases and long-standing membership in IRRD. TRL's role as the IRRD English-language coordinating center not only allows for dissemination of the results of TRL's research to the outside world, but also provides a means of channeling the rest of the world's published research to the desktops of TRL researchers via the in-house database system. Figure 2 illustrates the information coordination and dissemination performed by the TRL Library. There are plans to develop this system further during the next 2 years into an integrated database and electronic publishing system that will facilitate publication of TRL reports and findings on the World Wide Web and provide access to the TRL database over the Internet.

In support of IRRD, TRL abstracts its own and the United Kingdom's transport-related publications, and also receives abstracts in English from, among others, Australia, the United States, The Netherlands, Canada, Sweden, Finland, and China (which is sending increasing numbers of abstracts). TRL also has a reciprocal relationship with the Transportation Research Board whereby TRB stores the English-language portion of IRRD in

its Transportation Research Information Services (TRIS) database and sends the highway research portion of TRIS for inclusion in IRRD. Though TRL has difficulty lending original documents overseas, it can supply TRL publications and, subject to copyright restrictions, photocopies of certain articles or conference papers that are otherwise difficult to obtain from the national lending libraries. TRL can also often trace where original documents reside via its links with other IRRD centers worldwide.

Access to IRRD and Availability Worldwide

Each month, in addition to collecting all the English-language input to IRRD, TRL receives French and German and, starting in 1998, Spanish monthly files. These files are merged to produce the monthly trilingual file, which is sent to all Member institutes and, more important, to the international host server. The user can search for information on line, using a PC and modem, through the STN international host computer system. Most special libraries have access to this worldwide on-line system.

Since the beginning of 1995, IRRD has joined with the TRIS database and the European Conference of Ministers of Transport (ECMT) TRANSDOC database to produce the TRANSPORT CD-ROM,

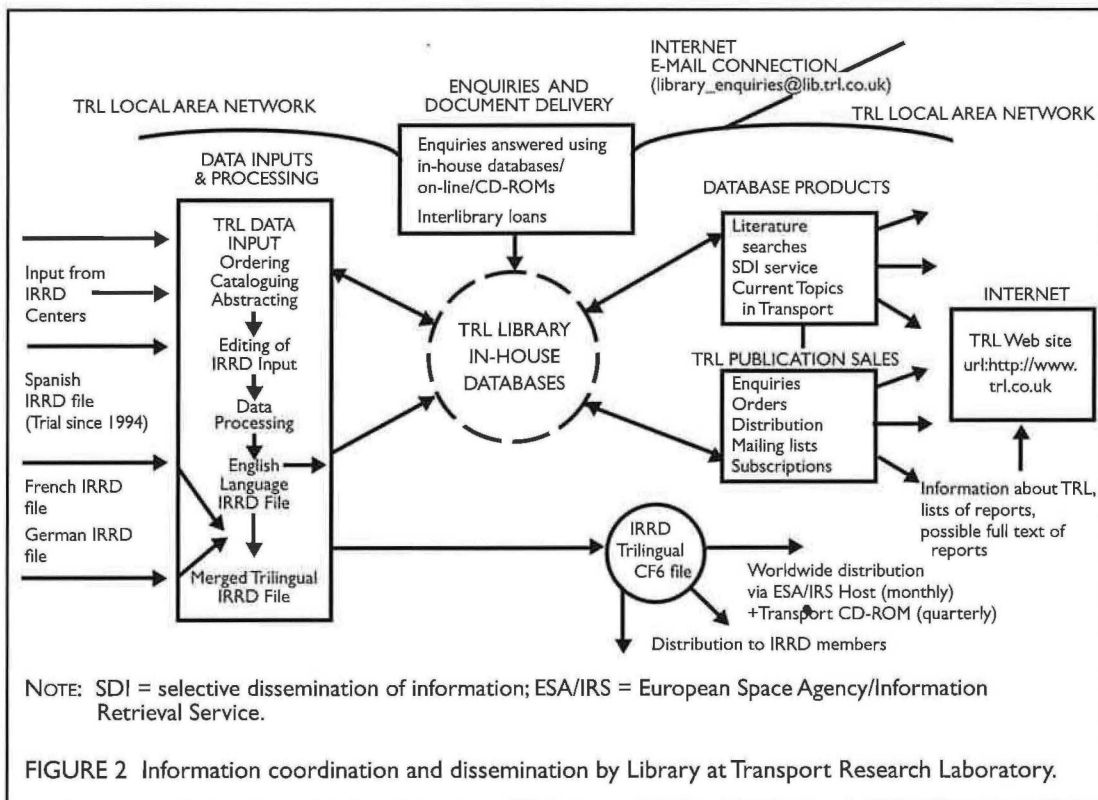


FIGURE 2 Information coordination and dissemination by Library at Transport Research Laboratory.

which is distributed by SilverPlatter Information, Inc. The TRANSPORT CD-ROM contains some 590,000 publication references from these three databases. There are two discs: an Archive disc, covering the period prior to 1988, and an Update disc, covering 1988 to the present and updated quarterly. It is possible to subscribe to both discs or just the Update disc. TRANSPORT can also be accessed via the Internet and, in the United States, via the newly released SilverPlatter® Pay per View option.

The TRANSPORT CD-ROM is a unique tool for finding information in most fields of the transport sector. Unlike the on-line STN version

of IRRD, however, the TRANSPORT CD-ROM does not include ongoing research information. With this in mind, IRRD is planning to make available a separate database of IRRD ongoing research information (Transport Research in Progress, or TRIP). Initially, TRIP will be distributed on floppy disk, but it is likely to be converted to CD-ROM form in the future. It is becoming more and more inevitable that each of these versions of the database will be available via the Internet, with likely developments such as hot-linking to electronic versions of the original documents not as far off in the future as might be imagined.

Useful Contacts/Addresses/Web Sites

Organisation for Economic
Co-operation and Development
Roads and Intermodal Transport Programme
Secretariat
2, Rue André Pascal
75775 Paris
France
E-mail: Patrick.Hasson@oecd.org
<http://www.oecd.org>

Bundesanstalt für
Strassenwesen Services
E-mail: irrd@bast.de

Laboratoire Central des Ponts et Chaussées
E-mail: leroux@lcpc.fr

TRL Library
E-mail: info@lib.trl.co.uk

SilverPlatter Information, Ltd.
<http://www.silverplatter.com>

STN International
<http://www.cas.org>
or <http://www.fiz-karlsruhe.de>

In addition to the original publishers,
most of the documents abstracted in the
IRRD database are available from the
following national lending centers:

INIST DIFFUSION
2 Allée du Parc de Brabois
F-54514 Vandoeuvre CEDEX
France
Tel: +33 83 50 46 64
Fax: +33 83 50 46 66

Universitätsbibliothek und TIB
Postfach 60 80
D-30060 Hannover
Germany
Tel: +49 511 762 3426
Fax: +49 511 71 5936

British Library Document Supply Centre
Boston Spa
West Yorkshire LS23 7BQ
United Kingdom
Tel: +44 1937 546060
Fax: +44 1937 546333