## CURRENT RESEARCH PROJECTS ON TRAFFIC CONFLICTS TECHNIQUE STUDIES

.

R-79-31

M. van den Hondel & J.H. Kraay Voorburg, december 1979 Institute for Road Safety Research SWOV, The Netherlands

#### INTRODUCTION

The initial steps towards international co-operation were taken by means of the first and second Workshops on Conflicts Techniques, held in Oslo in 1977 and in Paris in 1979, respectively. The first international review of research on this subject (Van den Hondel, M. & Kraay, J.H. Review of Traffic Conflicts Technique Studies. R-79-9. SWOV, Voorburg, 1979) has already been distributed. A second version is to be compiled at the beginning of 1980. In addition, the wish was expressed at the second seminar in Paris, to keep up-to-date reviews of current research. The first version of these is the review enclosed. It relates to current research on development of the method and its use in evaluation studies.

In compiling this survey the following steps were taken:
- Retrospective research was carried out in International Road
Research Documentation IRRD covering the period 1975 to June 1978;
- An SDI service (Selective Dissemination of Information) was made
on the IRRD file from June 1978 to September 1979.

The compilers of this publication request the reader explicitly to consider whether the information included herein is correct or incomplete. Should studies exist that have not been included in the IRRD system, please add them to the system via the appropriate national representative. The compilers would be very grateful to receive copies of the input.

A number of the projects included already have the status "completed". Since it is not clear which publication or publications have reported the results of these projects, they are (provisionally) included herein. Further information on them should be very welcome.

Studies are listed alphabetically by names of countries (as established in the IRRD thesaurus) and under countries by names of research organisations.

-2-

#### Australia

AUSTRALIAN ROAD RESEARCH BOARD

WILLIAMS, M.J.

## Traffic conflicts

IRRD 605740

The purpose of this project is to study the influence of geometric, traffic control and vehicle factors on driver behaviour at intersections and other conflict areas. Two aerial photographic techniques using model aircraft are to be compared to the presently used pole mounted camera. The new systems offer the advantages of greater observed ground area (including all legs of an intersection) and increased accuracy. They also can be operated from a moving control vehicle in the traffic stream.

Start date	1975-07
Estimated completion date	1978-12
Status active date	1978-08-11

## Australia

WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY, DEPARTMENT OF CIVIL ENGINEERING

## MILLAR, L.

Effects of varying levels and types of enforcement on intersection accidents

IRRD 605423

The aim is to investigate the effects of varying levels of traffic law enforcement on intersection accidents through the use of traffic conflicts technique and observations of violation incidence, and to determine the effectiveness of mechanical surveillance devices for traffic law enforcement aimed at reducing intersection accidents. The study will be conducted at five matched urban intersections with traffic lights.

Start date	1977-12
Estimated completion date	1979-03
Status active date	1978-06

## Austria

KURATORIUM FÜR VERKEHRSSICHERHEIT, VERKEHRSPSYCHOLOGISCHES INSTITUT; HOLOGISCHES INSTITUT DES KFZ GRAZ

#### SCHUETZENHOEFER, A. & HOEFNER, K.

Pilot-Study zur Konflikttechnik (Pilot study on the conflict technique)

IRRD 702247

A pilot study was undertaken at a junction in the town of Graz in order to examine the conflict technique (observation of behaviour by trained observers and photographic recording of conflicts). A junction was chosen which has had a bad accident record since 1974, where road users felt themselves to be in danger, where it was not possible to alter structural features, and where a new design was planned. A distinction was made between mild and serious conflicts: the former is defined as a controlled but fairly sudden braking or change of lane to avoid a collision; the latter as an uncontrolled manoeuvre (sudden deceleration, change of direction). In the first part of the study all conflicts which occurred within a period of 8 hours were recorded, and in the second part the junction was redesigned after an analysis of the results (installation of areas closed to traffic and introduction of a prohibition on stopping). Conflicts were again recorded. In the third part additional guidance was provided (hatched surfacings and areas closed to traffic) and conflict observation carried out. It was shown that the conflict techniques enables the efficiency of traffic control and guidance measures at a junction to be measured in the short term, before the occurrence of accidents, without great costs or loss of time.

Start date	1977-05
Actual completion date	1978-06
Status completed date	1978-09

PLESSEY COMPANY LTD., PLESSEY RADAR

DENHOLM, C.J. & THOM, A.E.R.

Objective measurement of vehicle conflicts at intersections, Phase 2

IRRD 604005

An experimental set of vehicle sensor arrays has been designed and installed at an intersection to provide data from which the measures indicating vehicle conflicts are being determined and assessed.

Start date	1975-11
Actual completion date	1976
Status completed date	1977-02

PLESSEY COMPANY LTD., PLESSEY RADAR

--

# Feasibility study of the measurement of vehicle conflicts at road intersections

IRRD 603998

A feasibility study has been successfully completed indicating ways in which vehicle conflicts may be identified from vehicle speed, direction + position information at an intersection.

Start date	1975-04
Actual completion date	1975-11
Status completed date	1976-03

TRANSPORT AND ROAD RESEARCH LABORATORY; UNIVERSITY OF NOTTINGHAM, DEPARTMENT OF PSYCHOLOGY

## GRAYSON, G.B.; HOWARTH, C.I.; LIGHTBURN, A. & REPETTO-WRIGHT, R.

The interaction of child pedestrians with vehicles

IRRD 605045

## This research will be undertaken:

(1) To develop a reliable technique for collecting data on child pedestrian-vehicle "interactions" that is, if possible, compatible with existing techniques for studying vehicle-vehicle "conflicts".
(2) To assess the contribution that "conflict" studies can make to child pedestrian safety in terms of inputs to remedial programmes and as a method for evaluating remedial measures.

(3) To apply the technique in a number and variety of different locations.

(4) To make some attempt to validate the technique by making comparisons of risk estimates based on "conflicts" and risk estimates based on accident data.

Supersedes IRRD 602917.

Start date	1977-10
Estimated completion date	1980-09
Status active date	1978-01

TRANSPORT AND ROAD RESEARCH LABORATORY; PLESSEY COMPANY LTD., PLESSEY RADAR

OLDER, S.J. & DENHOLM, C.

Measurement of vehicle conflicts at intersections, Phase 3

IRRD 604351

The research will consist of the design and development of a temporary data gathering system, which, together with the analysis techniques developed in Phase 2 (IRRD 604005), will be used to extend the capabilities of the system to conflict detection at different types of junction, at a low sensor and installation cost.

Start date	1976-10
Estimated completion date	1978-09
Status active date	1978-01

UNIVERSITY OF LONDON, ROYAL HOLLOWAY COLLEGE, DEPARTMENT OF MATHEMATICS

#### COOPER, D.F.; MCDOWELL, M.R.C.; STORR, P.A. & WENNELL, J.C.

## The effects of police presence on conflicts at road junctions

IRRD 603823

The investigation involves mathematical models of traffic behaviour at T-junctions. An event-stepping simulation model is the primary tool. Conflicts being defined as enforced decelerations of vehicles to avoid collision. The model is calibrated by comparison with films of traffic behaviour. It is found that the rate of conflicts at any site within the junction varies as the product of the intersecting flows. Empirical studies of gap-acceptance indicate that the median gap accepted by turning vehicles is related to the approach of speed of vehicles in the major road, and that police action can have a significant effect on drivers' turning behaviour. The model indicates that there are reductions in conflict rate with appropriate police activities. The development of methods for assessing and predicting risk over a non-urban road network is in progress.

Start date	1974-03
Actual completion date	1977
Status completed date	1978-04

UNIVERSITY OF LONDON, ROYAL HOLLOWAY COLLEGE, DEPARTMENT OF MATHEMATICS

COOPER, D.F.; DARZENTOS, J.; MCDOWELL, M.R.C.; OUVORWORIE, G.; STORR, P.A. & WENNELL, J.C.

The development and validation of a model or models predicting accident risk for non-urban intersections

IRRD 605093

The project aims to observe, model and understand driver behaviour at non-urban junctions. Observations will be made at a substantial number of junctions and data on vehicle movement recorded electronically. Other driver characteristics will also be noted. The data will be used to obtain gap acceptance functions, speeds and accelerations. These are used in a simulation model to predict number, location and severity of conflicts. The model is being calibrated using TRRL's fully instrumented function. The predicted conflict rates will be compared with 5-year site injury accident data, in an attempt to classify and rank T-junctions by accident risk. Extensions of the modelling and experiments to cross roads are planned. Statistical analysis of close following behaviour as a function of mean speed and flow are also being carried out.

Start date	1977-07
Estimated completion date	1979-06
Status active date	1978-01

UNIVERSITY OF NOTTINGHAM, DEPARTMENT OF PSYCHOLOGY

## HOWARTH, C.I.; LIGHTBURN, A. & ROUTLEDGE, A.

## The development of a training package for the study of traffic conflicts

IRRD 605094

The aim of the study is to produce a manual and associated visual aids which can be used by local authority traffic and road safety departments and others to train personnel to carry out traffic conflict observations studies. The work will begin with a feasibility study to determine the type of person to be trained, his/her ability and reliability in recording incidents such as conflicts and the constraints these impose on training methods and material. The main part of the contract's work, on the expectation that the feasibility study is successful, will be concerned with the development of the training package itself including its content categories of conflict situations covered, form of visual aids, use of roadside training, evaluation methods for trainee's progress and recommendations on length of training.

Start date	1977-02
Estimated completion date	1979-06
Status active date	1978-01

## France

ORGANISME NATIONAL DE SECURITE ROUTIERE (NATIONAL ROAD SAFETY ORGANIZATION)

## MUHLRAD, N.

Impact sur la securite des zones mixtes pietons-transports en commun

(Influence of mixed pedestrian-public transport zones on safety)

IRRD 501238

To analyse from the safety angle, the effect of introducing buses or trams in a pedestrianised zone or street. The study is in two parts.

(1) Analysis of bibliographic data and examples from other countries.
 Summary or results. Inventory of layouts offering possibilities.
 (2) Analysis of examples taken from towns in France. Collection of basic data, in-situ study, collecting of additional data (recording of conflicts, observation of behaviour).

Start date	1978-01
Estimated completion date	1978-12
Status active date	1978-05-08

## France

ORGANISME NATIONAL DE SECURITE ROUTIERE (NATIONAL ROAD SAFETY ORGANIZATION)

## MALATERRE, G. & MUHLRAD, N.

Mise au point d'une methodologie des conflits de trafic (Development of a methodology for traffic conflicts)

IRRD 501294

To develop a method of collecting and analysing data on traffic conflicts for urban areas. The method must offer a double advantage: validity as an evaluation tool; usefulness and validity as an aid to detection. An international experiment will be set up in the town of Rouen. Two or three teams from other countries (United Kingdom, Sweden, etc.) will study with a team from ONSER one or several junctions, each team using its own technique (in particular, techniques in which data collection is carried out on film). Results will be analysed and compared together with the costs and speed of the methods used.

Start date	1979-01-01
Estimated completion date	1979-12-31
Status active date	1979-04-27

ARBEITSGRUPPE FUER REGIONALPLANUNG (WORKING GROUP FOR REGIONAL PLANNING)

#### ALBRECHT, R.

Möglichkeiten zur Verbesserung der Verkehrssicherheit von Fussgängern und Kindern in gewachsenen Stadtbereichen (Ways of improving the safety of pedestrians and children in developed urban areas)

IRRD 701857

The object of the work is to analyse the effect of measures taken to modify the road network on the behaviour of pedestrians, children and drivers. The study is being carried out on a model project for controlling traffic in Berlin (West). Single measures and total measures are being evaluated for their contribution to improving traffic safety. From the results of the case study recommended improvements are being drawn up. One aim of the research is to develop a method of rapidly checking the effectiveness of improvement measures without great expense. Measures of effectiveness are obtained by observation of conflicts. The methods of Erke and Zimolong used in assessing pedestrian conflicts are being extended to areas with little traffic and low accident rates. The research is divided into a comparative parallel study and a before and after study.

Start date	1978-10-01
Estimated completion date	1978-10-30
Status active date	1978-10

FORSCHUNGSGEMEINSCHAFT BAUEN UND WOHNEN (RESEARCH ASSOCIATION FOR CONSTRUCTION AND HOUSING)

-

Verkehrsanlagen aus der Sicht der Fussgänger - Eignung und Annehmlichkeiten von Einrichtungen für den Fussgänger an Konfliktpunten mit dem Fahrzeugverkehr

(Traffic facilities from the viewpoint of the pedestrian - Suitability and acceptability of devices for pedestrians at areas of conflict with vehicular traffic)

IRRD 701625

The project consists of the following stages:

(1) Selection of test situations and criteria for testing and evaluation, observation of the experience and judgments of the test groups, and collation of situations which cause problems for the pedestrian.

(2) Evaluation of the selected situations by test groups. These groups consist of specialists, random samples of the public, groups who are less mobile (old people, people with prams) and children.

(3) Systematic observation of the type and frequency of conflicts in particularly critical but typical situations.

(4) Critical evaluation of the results of the study and comparison of them with existing planning specifications, and proposed supplements and amendments to the specifications.

Start date	1976-08
Estimated completion date	1977
Status active date	1977-06

INGENIEURBÜRO M. EICHENAUER/H.H. VON WINNING/E. STREICHERT (ENGINEERING BUREAU M. EICHENAUER/H.H. VON WINNING/E. STREICHERT)

EICHENAUER, M.; VON WINNING, H.H. & STREICHERT, E.

Sicherheit und Verhalten von Verkehrsteilnehmern auf verkehrsberuhigten Strassen. Pilotstudie am Beispiel Unterhaching (Safety and behaviour of road users on roads with restricted traffic. Pilot study in Unterhaching)

IRRD 701817

The object is to establish changes which arise through the conversion of conventional road space into pedestrian streets which can be used by vehicles. On these streets the whole area of the road may be used by all road users, motorised traffic being forced to slow down because of this. The behaviour and subjective views of various road users - pedestrians, cyclists and car drivers - is being established, with particular reference to the following: transport function - traffic intensities, through traffic, origin and destination traffic; stopping function - private value (freedom of movement, general contentment with the road situation), communication value (conversations, reactions), functional versatility (duration of stay, special events), general safety criteria - subjective safety, accidents, conflicts, speed, acceptance. The methods being used are counts, perception of signs, observation, automatic photography and interviews. Results of a before and after comparison are not yet available.

Start date	1977
Estimated completion date	1979
Status active date	1978-11

INGENIEURBÜRO FÜR STRASSENWESEN (ENGINEERING BUREAU FOR TRAFFIC)

Verkehrssicherheit im Einfahrbereich planfreier Knotenpunkte (Safety at the entry point of grade separated junctions)

IRRD 701427

The intention is to examine the effects of structural alterations at the entry points of grade separated junctions on driver behaviour and accidents, taking account of vehicle-related influencing factors at 7 to 9 junctions over a period of about 2 years. As well as an evaluation of accidents over the last 4 years, extensive observations are to be made in order to be able to analyse driver behaviour at the various improved entry points. This is to include the observation of the numerous nearmisses, which give a better statistical evaluation because there are many more of them than actual accidents. Whereas in actual accident studies conclusions can only be drawn afterwards from looking at damage which has occurred, the observation of behaviour enables dangers which arise through errors in the structural and optical alignment to be recognised and eliminated before these lead to further accidents.

Start date	1975-06
Estimated completion date	1977
Status active date	1977-09

TECHNISCHE UNIVERSITÄT BERLIN, LEHRSTUHL UND INSTITUT FÜR STRASSEN-UND VERKEHRSWESEN (TECHNICAL UNIVERSITY OF BERLIN, INSTITUTE FOR ROAD AND TRAFFIC STUDIES)

--

Sicherung der Linksabbieger an Lichtsignalanlagen (Making the left-turning driver safe at traffic signals)

IRRD 700581

In practice various methods are used to make left-turning traffic safe at signal-controlled junctions: for example, free leftturning with prescribed time, prohibited standard time, additional time for the direction heavily loaded with left-turning vehicles using green arrows, lengthening of the interim periods and use of green arrows, warning of simultaneously freed meeting traffic by flashing yellow arrows, use of special phases for left-turning traffic. Up to now there have been no studies which provide information as to which of the solutions applied hitherto, taking account of currently predominant boundary conditions, lead to a reduction in dangerous situations and accidents involving leftturning vehicles and other traffic. The conflict between safety and capacity is also to be taken into account.

Start date	1974
Estimated completion date	-
Status active date	1977-09

TECHNISCHE UNIVERSITÄT BERLIN, INSTITUT FÜR LANDVERKEHRSWEGE (TECHNICAL UNIVERSITY OF BERLIN, INSTITUTE FOR LAND TRANSPORT ROUTES)

#### HOFFMANN, G.

Verkehrstechnische Probleme beim Umschaltvorgang in der Fahrstreifensignalisierung

(Traffic engineering problems involved in the switching process in traffic lane signalisation)

IRRD 701986

Traffic lane signalisation makes it possible to increase the quality of traffic flow and capacity on certain urban main roads without any additional structural measures being taken. Since this traffic lane signalisation is kept flexible because of the varying traffic intensity, the result is frequent switching or different lane instructions for different sections of road in one direction. In this connection the Working group on Traffic guidance in the Working committee Signalisation has demanded the creation of a transition signal between the extinguishing of the green arrow signal and the switching on of the red prohibitive cross. The object is to avoid the occurrence of driving through the red light, which can be brought about by dynamic boundary conditions or lack of opportunity to change lane. The main object of the work is to analyse driver behaviour. Extensive traffic engineering measurements are to be undertaken. These are to be supported by simulation studies of possible lane changes in the case of a temporal or local closing of a traffic lane. By analysing accidents it is hoped to obtain information on the extent to which critical situations in relation to switching during traffic lane signalisation are reflected in actual accidents. These accident studies are to be supplemented by direct

traffic observations using the new traffic conflict technique. The main study is to be focused on traffic lane signalisation in Heerstrasse in Berlin. It will also be possible to make before and after studies of this road.

Start date	1978-04
Estimated completion date	1980-04
Status active date	1979-04

Ireland

AN FORAS FORBARTHA (THE NATIONAL INSTITUTE FOR PHYSICAL PLANNING AND CONSTRUCTION RESEARCH)

CROWLEY, F.; GOLDEN, M. & HEARNE, R.

Conflict studies as an accident prediction method

IRRD 605494

Conflicts as measured by film records from street and road locations will be used to establish a technique to predict accident risk at the location studied.

Start date	1978-06
Estimated completion date	1978-11
Status active date	1978-06-16

## Norway

INSTITUTE OF TRANSPORT ECONOMY

## AMUNDSEN, F.

## Nesten ulykker (Near misses)

IRRD 604068

The aim is to utilise a method developed for detecting traffic conflicts in order to describe the effect of different traffic control measures such as the use of signs, signals, and lane control at intersections etc.

Start date	1975
Actual completion date	1976
Status completed date	1979-06

.

## Norway

NORGES TEKNISKE HOEGSKOLE, INSTITUTT FOR SAMFERDSELTEKNIKK (NORWEGIAN INSTITUTE OF TECHNOLOGY, DIVISION OF TRANSPORTATION ENGINEERING)

## SAKSHAUG, K. & STEN, T.

Fotgjengere i signalregulerte kryss (Pedestrians at signalized intersections)

IRRD 605617

The aim is to find out how to improve pedestrian safety at signalised intersections. A literature survey is carried out, and the police documents of 261 pedestrian accidents at signalised intersections are analysed. By using a video recorder, the behaviour of the pedestrians is studied (at 8 junctions), and conflicts between pedestrians and vehicles are recorded. Pedestrians walking against the red light have been interviewed.

Start date	1976
Actual completion date	1979
Status completed date	1978-06

Norway

NORWEGIAN INSTITUTE OF TRANSPORT ECONOMICS

SOLBERG, P.

<u>Vegkryss</u> (Intersections at grade)

IRRD 604074

The project aims at trying to find a relationship between certain intersection designs and traffic conflicts, such as accidents. In addition to a survey of existing research results, conflict studies and studies of driver behaviour at a number of selected sites will be conducted.

Start date	1976-01
Actual completion date	1976
Status completed date	1976-05

LUNDS TEKNISKA HOEGSKOLA, INSTITUTIONEN FOER TRAFIKTEKNIK (LUND UNIVERSITY OF TECHNOLOGY, DEPARTMENT OF TRAFFIC PLANNING AND ENGINEERING)

GAARDER, P.; GUSTAVSSON, A.; HANSEN, L.; HYDEN, C.; LINDERHOLM, L. & STAAHL, A.

Oskyddade trafikanters saekerhet i taetorters trafiksystem (Pedestrian and cyclist safety in urban traffic systems)

IRRD 605281

The aim is to gain increased knowledge regarding unprotected road users' subjective and objective risks in urban traffic with reference to those behaviours and situations that cause dangerous situations. The results of the project are intended for immediate use in planning for increased traffic safety. The project is divided into a number of sub-projects, implying field studies in various urban areas. Here the conflict technique developed at the institution will be applied.

Start date	1977-07
Estimated completion date	1980-06
Status active date	1979-06

LUNDS TEKNISKA HOEGSKOLA, INSTITUTIONEN FOER TRAFIKTEKNIK (LUND UNIVERSITY OF TECHNOLOGY, DEPARTMENT OF TRAFFIC PLANNING AND ENGINEERING)

## NETTELBLAD, P. & COLLIANDER, J.

Trafiksaekerhet paa bussleder i bostadsomraaden (Traffic safety on busways in residential areas)

IRRD 604054

The aim of the project is to get basic knowledge on traffic safety on bus routes in residential areas, and to get a better basis for need estimation and for planning of future studies in the field. The project includes studies of accidents on bus routes in Swedisch residential areas and on the bus route systems in the English towns Runcorn and Redditch. Interviews are conducted with bus drivers and with residents in residential areas with bus routes. As a further complement to the risk determination with accident analysis a method for conflict registration will be used.

Start date	1976-01
Estimated completion date	-
Status research completed date	1979-06

LUNDS UNIVERSITET, INSTITUTIONEN FOER TILLAEMPAD PSYKOLOGI (LUND UNIVERSITY, DEPARTMENT OF APPLIED PSYCHOLOGY)

## SVENNSSON, B. & TRYGG, L.

Personlighet och foerarutbildning (Personality and driver education)

IRRD 606227

Studies are carried out of car drivers who have been involved in conflict situations. The aim is to describe eventual connections between the personality characteristics of car drivers involved in conflict situations, and (1) characteristics of drivers involved in accidents (known from earlier investigation), (2) the nature of the conflict, and (3) the cause of the conflict. The method used is to stop road users in town who have been involved in conflicts and interview them about the conflict. They are also confronted with a TV-recording of the conflict. Later a new interview with the persons concerning traffic is carried out, and they are tested with instruments to measure personality. These instruments are developed by the Department of Psychology, Lund University. Data from the tests and later interviews are compared by computer with the first interview.

Start date	1978-03
Estimated completion date	1979-06
Status active date	1979-04

STATENS VAEG- OCH TRAFIKINSTITUT, TRAFIKAVDELNINGEN (NATIONAL SWEDISH ROAD AND TRAFFIC RESEARCH INSTITUTE, TRAFFIC DIVISION)

## BRUEDE, U. & NILSSON, G.

Olycksstudier avseende vaegkorsningar (Accident studies at intersections)

IRRD 604247

Accidents and traffic conflicts will be studied simultaneously at intersections. The aim is to form a base for specifications of intersection design. The intersections will be classified and exposure measures defined. Accidents, traffic distribution and traffic flow will be studied. The effect of traffic control by means of geometric design will be studied, and models of traffic safety will be suggested.

Supersedes IRRD 601068.

Start date	1976-01
Estimated completion date	1981
Status active date	1979-06

STATENS VAEG- OCH TRAFIKINSTITUT, TRAFIKAVDELNINGEN (NATIONAL SWEDISH ROAD AND TRAFFIC RESEARCH INSTITUTE, TRAFFIC DIVISION)

#### LINDEROTH, U.

Vaegkorsningar. Utveckling av indirekta trafiksaekerhetsmaatt (Road junctions. Development of indirect road safety measures)

IRRD 606454

The aim of this project is:

(1) To propose indirect road safety measures.

(2) To investigate any relationship between the proposed indirect road safety measures and police reported accidents with respect to the following conflict types: (A) catching-up on main road,
(B) turning and meeting, and (C) conflicts between crossing and approaching traffic and main road traffic.

(3) To evaluate the method, resource and data requirements for rural traffic and to formulate proposals for a five year plan in this field.

The studies will be carried out as a literature survey and field studies of the relationship between the indirect road safety measures and accident measures in various types of junctions.

Start date	1979-01
Estimated completion date	1979-12
Status active date	1979-06

STATENS VAEG- OCH TRAFIKINSTITUT, TRAFIKANT- OCH FORDONSAVDELNINGEN (NATIONAL SWEDISH ROAD AND TRAFFIC RESEARCH INSTITUTE, ROAD USER AND VEHICLE DIVISION)

## ARNBERG, P.W.

## Trafikmiljoe foer barn i foerskola

(Traffic environment for children in nursery school)

IRRD 605474

The aim is to elucidate the following points concerning children in nursery schools: (1) Their traffic environment; e.g. on pedestrian crossings, cycle tracks, transport mode to school, etc. (2) Risks connected with nursery and comprehensive schools as estimated by parents and teachers. (3) Frequency and type of accidents and near accidents in connection with going to school. Data will be collected in 300 nursery schools randomly selected from different regions of the country by means of questionnaires, interviews and observations of children and environment. Traffic

training in preschool will also be studied.

Start date	1977-07
Estimated completion date	-
Status active date	1979-04

STATENS VAEG- OCH TRAFIKINSTITUT, TRAFIKANT- OCH FORDONSAVDELNINGEN (NATIONAL SWEDISH ROAD AND TRAFFIC RESEARCH INSTITUTE, ROAD USER AND VEHICLE RESEARCH DIVISION)

## LAURELL, H.

Intervjuundersoekning av laangtradarfoerare och personbilister (Interview investigation of long distance lorry drivers and car drivers)

IRRD 604740

The aim is to study conflicts between car traffic and heavy traffic. To this end an inventory is made of those traffic situations involving these two transport modes where conflict is likely.

Start date	1977-04
Actual completion date	1977
Status completed date	1979-04

UPPSALA UNIVERSITET, FORSKNINGSGRUPPEN FOER TRAFIKSAEKERHET, PSYKOLOGISKA INSTITUTIONEN (UNIVERSITY OF UPPSALA, TRAFFIC SAFETY RESEARCH GROUP, DEPARTMENT OF PSYCHOLOGY)

AABERG, L.; HOERBERG, U. & ERIKSSON, B.

Trafikanters informationsinhaemtning i kritiska situationer (Information registration of road users in critical situations)

IRRD 605482

Conflicts and other interactions between pedestrians and car drivers. Especially at pedestrian crossings, are studied with the aid of the conflict technique developed by C. Hyden, Lund University of Technology.

Start date	1977-07
Estimated completion date	1980-06
Status active date	1979-06

VBB VATTENBYGGNADSBYRAAN (VBB CONSULTING ENGINEERS, ARCHITECTS AND ECONOMISTS)

## HANSSON, A.

## Faeltmaetninger auseende fordons- och gaangtrafikens

(Measurements concerning capacity and delay for street intersections)

IRRD 603475

This project formed parts of the basis for the Swedish Capacity manual for streets and roads, published 1977 (see IRRD no. 602747). It consisted of four field studies:

(1) Gap acceptance and delay at unsignalised intersections.

(2) Gap acceptance and delay for left turn movements at signalised intersections.

(3) Conflicts between pedestrians and turning vehicles at signalised intersections.

(4) Effects of lane widths and lane markings on the capacity of a signalised approach.

Start date	1973
Actual completion date	1977
Status completed date	1979-05