

## Status Report of Japan

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#### 1. Traffic Accidents

The number of fatalities in traffic accidents in Japan marked record high in 1970 with 16,765 deaths. Since then from 1971, the death toll has been dropping rapidly, halving to 8,466 deaths in 1979. However, the toll made an upturn again in 1981, numbering 11,451 deaths in 1992. 1993 again saw a downward tendency, with the number halving again in 2002 to 8,326 deaths (see Figure 1).

The first drop in the death toll from accidents in 1971 can be attributed mainly to the enhancement and establishment of road management facilities, and boosting of awareness by educating drivers and through education at schools. The drop from 1993 on the other hand is thought to have been the successful outcome of efforts such as the promotion of various measures, for instance; enhancement of automobile safety

technologies as represented by crash worthiness measures, establishment of rescue systems in the event of accidents, various traffic safety educational programs, and campaigns to enlighten drivers to the importance of fastening their seat belts.

Characteristics of fatal traffic accidents lately include: (1)the death toll of elderly persons above age 65 is shifting at a high rate, making up about one-third of all fatalities, (2)though the percentage of drivers wearing seat belts on general roads is still low at about 80%, the fatality rate in accidents involving failure to fasten seat belts is higher than that when seat belts are fastened, (3)the number of fatal accidents in the nighttime is shifting at a high rate.

The number of traffic accidents and injuries which had been increasing since 1977 started to drop in 2002. Until then, though the death toll had been decreasing little by little from 1977 to 2001, the number of traffic accidents continued to increase. Last year, we succeeded in putting an end to the increase, and as our next task, we hope to commit to devising various safety policies to reduce traffic related death toll as well as further reduce traffic accidents.

Looking at the number of traffic accidents in

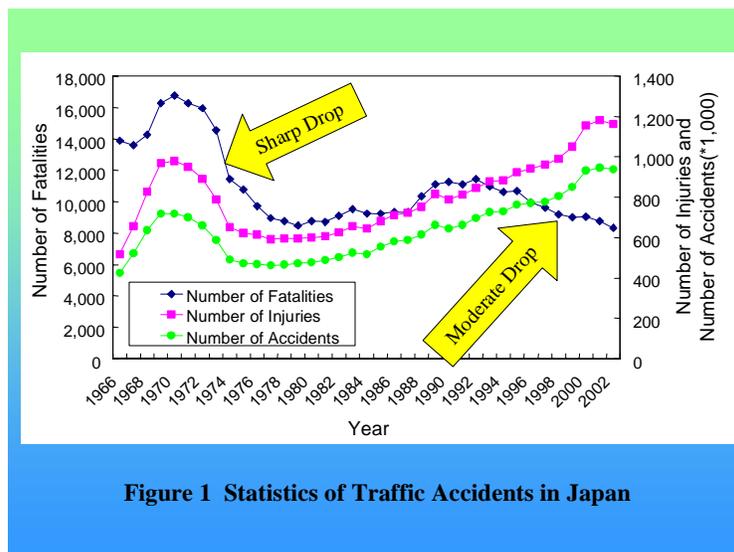


Figure 1 Statistics of Traffic Accidents in Japan

Japan by type of accident, the most common type of accident is rear-end collisions, followed by crossing collisions, and collisions while turning left or right. The number of single-vehicle accidents and head-on collisions is relatively low. Looking at the number of deaths by type, the most common is death while driving, followed by pedestrian death. These two categories alone make up more than 70% of all deaths.

## 2. Accident Surveys

We are currently conducting an accident analysis centering around the Institute for Traffic Accident Research and Data Analysis which was set up in 1992. Traffic accident analysis plays an important role in clarifying the causes of accidents, clarifying the mechanism of accidents, establishing efficient safety measures, and prior and post evaluation of the results of such measures. In particular, data analysis for collecting data for accurately identifying the phenomena of actual traffic accidents that take place, sorting complicated factors, and clarifying the causes is crucial in the prior and post evaluation of the effects of measures.

In this perspective, a nationwide large-scale

macro survey (nationwide accident survey by the Police Agency), and micro survey by specialists aiming at detailed analysis are currently being implemented (see Figure2).

To give one example, we are planning to extract the approximately 3,200 accident prone spots in the country, analyze the causes of accidents (macro survey), and based on the results of analysis, implement measures. In 1993, we set up in-depth survey spot in the Tsukuba area, and gathered information covering several thousand items in total for more detailed analysis (micro survey).

## 3. Enhancement of Automobile Safety

In 1999, the Council for Transport Technology (currently Council for Transport Policy) recommended guidelines on automobile safety measures under the advise of the Minister of Land, Infrastructure, and Transport. As the course of future automobile safety measures, the guidelines give the mid-term goal of first reducing the death toll, and proposes a series of consistent efforts based on the actual situation of accidents that occur ranging from extracting important tasks that should be undertaken to

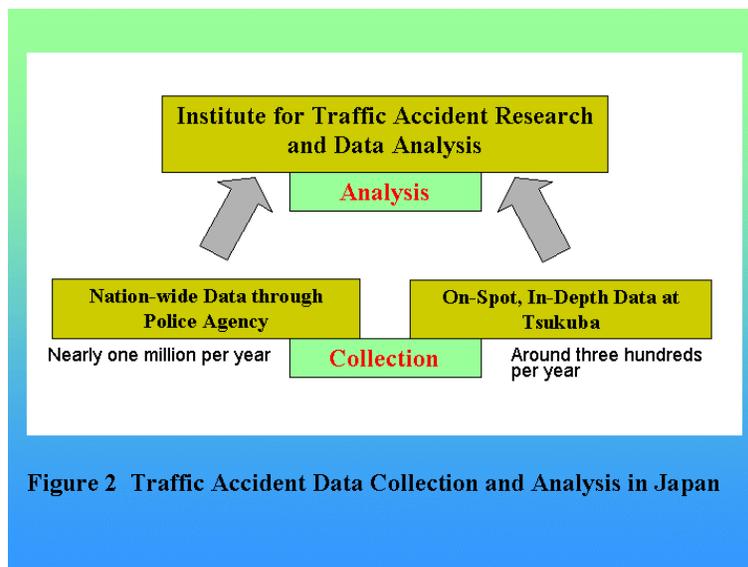


Figure 2 Traffic Accident Data Collection and Analysis in Japan

reviewing measures for each stage from basic research to diffusion of the measures.

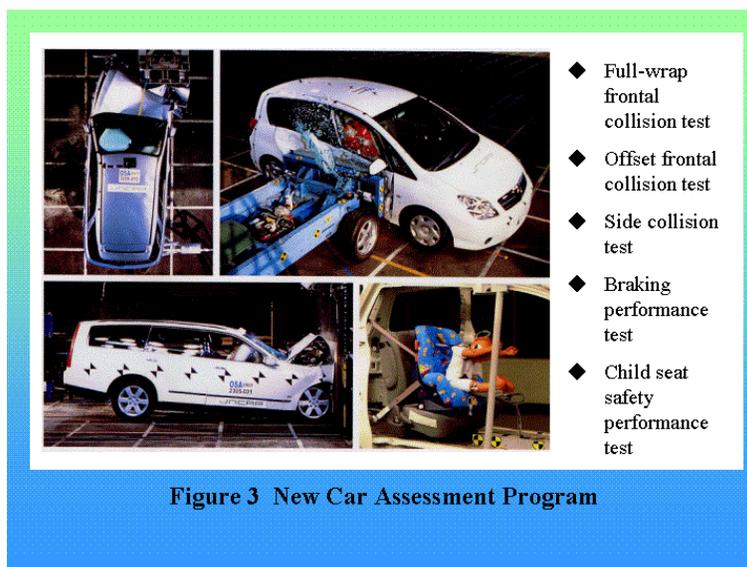
Specifically, based on the goal of reducing the death toll (30 day death toll) by 1,500 deaths by 2010 through automobile safety measures, we are promoting general measures through the enhancement of standards related to automobile safety, providing automobile assessment information, enhancement of automobile tests and inspections, enhancement of recall systems, development of advanced safety vehicle, and spread of such vehicles, etc. Major activities related to these endeavors are described below.

First, with regard to the enhancement of standards related to automobile safety, key measures taking into account common accidents with fatal and injury accidents are devised based on the results of accident analysis, and items that need to be standardized are reviewed while taking into account the development and spread of automobile safety technologies. Recent plans include adopting laws requiring the installation of speed limiter devices in large vehicles, as well as introducing regulations to prevent dead zone accidents of RVs and regulations to prevent head injuries of pedestrians.

With regard to the provision of automobile assessment information (see Figure 3), this involves a project, which provides comparative information on automobile safety to automobile users promoted mainly by the National Organization for Automotive Safety & Victims' Aid. Since the year before the last, we have been providing comparative information on the safety of child seats by model. As reference information on maintenance and management, we also provide information on inspection results of passenger cars by model on a regular basis (strong and weak points).

With regard to the enhancement of automobile tests and inspections, by promoting the establishment of testing systems in line with the enhancement and reinforcement of automobile safety standards, proper implementation of automobile inspections and thorough implementation of maintenance and management by automobile users are promoted to enhance automobile inspection facilities.

Efforts are made to enhance recall systems by promoting appropriate use of recall systems, implemented through guidance and supervision of automobile manufacturers on ensuring automobile safety. The government is also committed to reinforcing



the accumulation and analysis of information on automobile problems from users through 24-hour systems, toll free services, and Internet sites to identify vehicles that need to be recalled as early as possible.

#### 4. Advanced Safety Technology

The Ministry of Land, Infrastructure, and Transport implemented the Phase 1 ASV Project from 1991 to 1995, during which a total of 19 test cars equipped with state-of-the-art technology were built. In this Phase 1 ASV Project, a total of 20 technologies were proposed, and the next generation safety car was outlined. In the Phase 2 ASV which was implemented from 1996 to 2000, research and development for practical application centering around safety and technologies to prevent accidents were carried out with the participation of manufacturers of not only passenger cars, but trucks, buses, and two-wheeled vehicles as manufacturers well. In the Phase 2, a total of 35 ASV cars were manufactured, and an open demonstration was held in Tsukuba in November 2000 (see Figure 4).

Now, the Phase 3 ASV is currently being carried out as a five-year project. It focuses on the development of new communication technologies and efforts to

spread these technologies. Some of the advanced technologies reviewed have already been put to practical application. Examples include systems already mounted to cars available on the market such as Curve Warning System, Adaptive Cruise Control with Brake Control, Lane-keeping Assistance System, Shift Control Cooperating with Car Navigation System, Drowsiness Warning System and Headway Distance Warning System.

The basic philosophy of ASV technology is based on three principles; firstly it is a technology which aids and supports automobile driving, and human beings are still responsible for the driving (driver assistance), secondly, through optimum design of the human-machine interface, the technology shall be made easily accessible by the driver (driver acceptance), and thirdly, the technology shall be broadly received by the community by estimating the advantages it contributes to safety (social acceptance). Currently, we are conducting research and development giving consideration to these points. Should all ASV technologies be realized and spread widely, it is expected to reduce the current death toll by traffic accidents by 40%.

As we all know, ITS technology is anticipated to

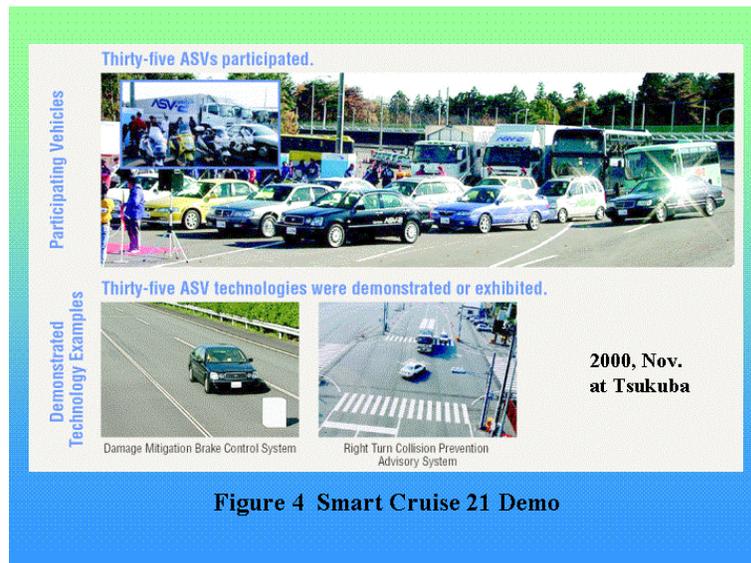
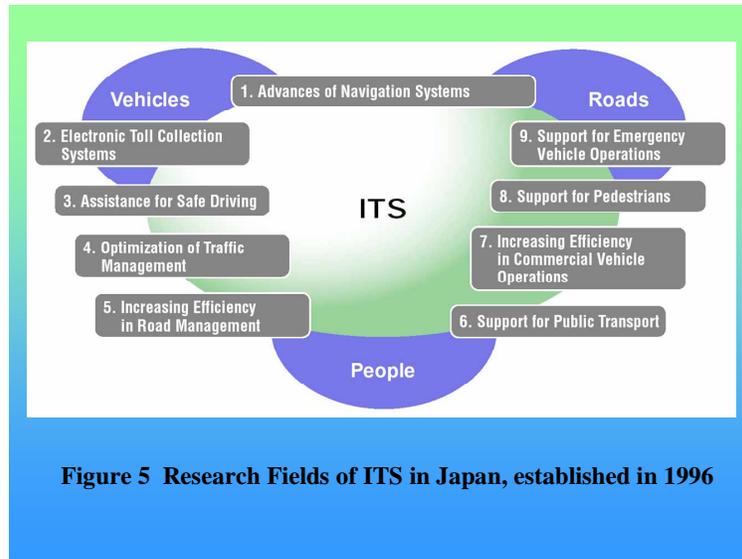


Figure 4 Smart Cruise 21 Demo



contribute in many areas; environment, safety, and easing traffic, and Japan has very strong interests in promoting its spread. Based on the ITS general plan devised by related ministries in July 1996 (see Figure 5), currently navigation systems are being advanced, electric toll collection system and systems to assist convenient and safe driving are being put to practical application and spread extensively. Placing high hopes on the progress of ITS technology in these areas, the Ministry of Economy, Trade, and Industry is actively implementing various policies to promote the spread of this technology.

### 5. International Harmonization

Recognizing the importance of promoting international harmonization of automobile standards and standardization with the increase in international distribution of automobiles, Japan is currently promoting the following measures.

#### (1) International Harmonized Research Activities (IHRA)

To promote international harmonization of standards in various countries after they are introduced,

complicated adjustments are required between the nations, and these take up tremendous efforts and time. This project was thus launched under the umbrella of the ESV conference to promote harmonization in the research stage. In this project, Japan strives to contribute actively by serving as the chairman of the Pedestrian Protection Expert Assembly and link the results to the activities of the UN/ECE/WP29.

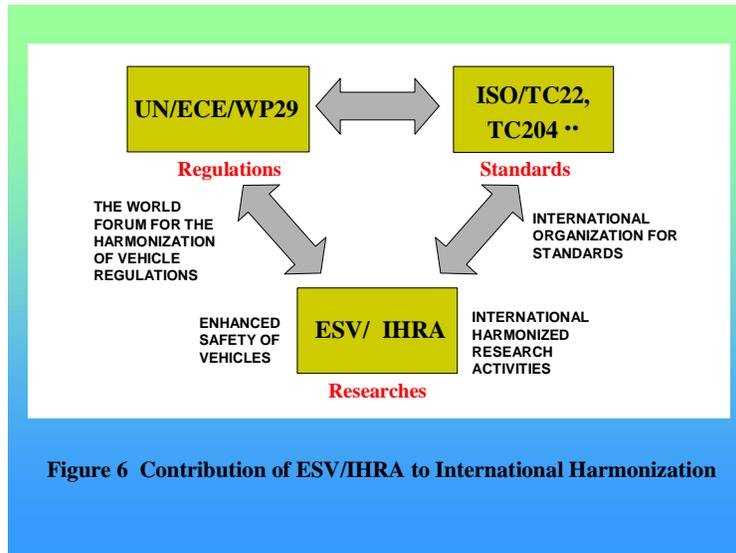
#### (2) Activities in WP29

Japan is committed to contributing actively to the activities in WP29 centering around the following four points:

(i) Promote the stage-by-stage adoption of ECE regulations, and actively propose the revisions of regulations required for this.

(ii) Japan plays a leading role in the establishment of pedestrian protection and on-board diagnosis system (OBD) as well as GTR proposals on common issues such as vehicle categorization, etc. It plans to continue contributing actively to the establishment of GTR.

(iii) ITS is approaching the level of



commercialization, and an early introduction of the technology to the market smoothly is considered essential upon ensuring the safety of automobiles. Japan will contribute actively to related discussions.

(iv) More and more countries in Asia are participating in WP29 or considering membership lately. Japan will contribute to invigorate such moves.

(3) ISO activities

Along with the above activities related to

establishing standards, we are also actively involved in standardization efforts recognizing the importance of ISO activities (see Figure 6). As a recent example, the international standardization of the Transport information and control systems - forward vehicle collision warning systems - Performance requirements and test procedures proposed by Japan as an international standard related to advanced technologies was realized as ISO15623. We will continue our enthusiastic commitment to various activities aiming at international harmonization through appropriate standardization.