

“Toward Healthy Cities with Soft Cars -From Ichikawa to the World-”



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Extended Abstractⁱ

1. Introduction: Better Accommodation of Cars is Essential for Healthy Cities

For the safety and livability of communities, it is essential to accommodate cars better both in existing urban areas and in planned cities, with avoiding too much reliance on road widening and new construction, and thus avoiding traffic crashes and nourishing comfortable environment for pedestrians and cyclists.

World Report on Road Traffic Injury Prevention published by the World Health Organization and World Bank in 2004ⁱⁱ tells us that in 2002 total number of road traffic death of the world amounted to 1,183 thousands, and for the age group between 5 and 45, road traffic injuries was the second leading cause of deaths after child cluster diseases and/or HIV/AIDS. About 90 per cent of the road traffic death occurred in developing countries. The estimate of total number of road traffic injuries of the world in the year was between 20 and 50 million. Based on these findings, Mr. Kofi Annan, former Secretary of General of UN, delivered his message on March 26, 2004, World Health Day, calling for more action to prevent needless suffering.

These indicate that road safety is one of the most serious global health issues without which we cannot make our cities healthy and to which more attention is needed.

2. Soft Car Project

2-1. Concept

Speed calming is the most straight and effective measure for this accommodation. Based on this view, the author has been engaged in a project of developing Soft Car, which is defined as a car whose maximum speed is adapted to the level suitable to road environment and the maximum speed is shown by indicating light to the driver and to others out of the car, who are local residents, pedestrians, cyclists, other drivers, etc. The concept of Soft Car emerged in 1982 in Tsukuba Science City, a large man made town in Japan developed in the period of post war rapid economic growth, where cars were the only media of transportation.

2-2. Soft Car System

The author and his associates started Soft Car Project (“Project” hereinafter) in 2000 with three years Millennium Project Fund of the Japanese government. In the Project, they developed Soft Car System to turn existing cars into Soft Cars, which was composed of three equipments: (i) Maximum Speed Indicator, which indicates four levels of maximum speed (15kms, 30kms,

60kms and 100kms per hour) with four different colored lights (rainbow, blue, yellow-green and orange) to the driver and to anyone viewing the car and excess of speed limit is identified by a flickering of the lights; (ii) Maximum Speed Controller, which limits the maximum speed to different levels by adjusting the amount of gas-air supplied to engine utilizing computer; and (iii) equipment which combines GPS and Digital maps to identify speed limit of the road on which the car is running. The Soft Car System was installed on an electric vehicle named Q car manufactured by a toy maker and Soft Q Car was born. Soft Q Car has special function to control its speed to the level of pedestrians, i.e. 2kms, 4kms, and 6kms per hour (Figures 1 and 2).

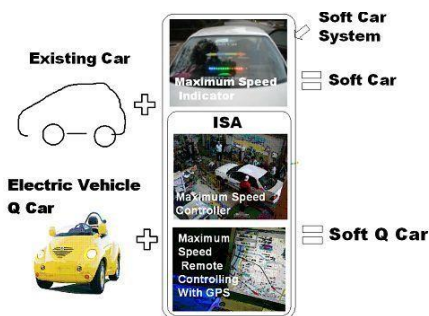


Figure 1 Composition of Soft Car and Soft Q Car

Maximum Speed Indication		Maximum Speed Control	
Rainbow	15km/h	15km/h	15, 6, 4, 2 km/h
Blue	30km/h	39km/h	30 km/h
Yellow Green	60km/h	69km/h	50 km/h
Orange	100km/h	119km/h	

Indicating light starts flickering when maximum speed is exceeded.

Figure 2 Maximum Speed Indication and Control of Soft Car

2-3. Soft Car Experiments

Soft Car Experiments was carried in two period, first from December 2001 to January 2002 and second from December 2002 to March 2003 in Ichikawa with installing the Maximum Speed Indicator on 28 cars of local residents in the vicinity of the Chiba University of Commerce (CUC), where most of the roads were very narrow and two streets have 2 lanes for cars and buses (Figure 3). Questionnaire surveys proved high acceptance of Soft Car by residents and monitoring drivers. The record in the second period showed much slower and more stable driving with the Maximum Speed Indicator (Figure 4).

Test driving in March 2003 proved appropriate performance of Maximum Speed Controller and GPS-Digital map system (Figure 5).



Figure 3 Experiment Zone and Speed Sign

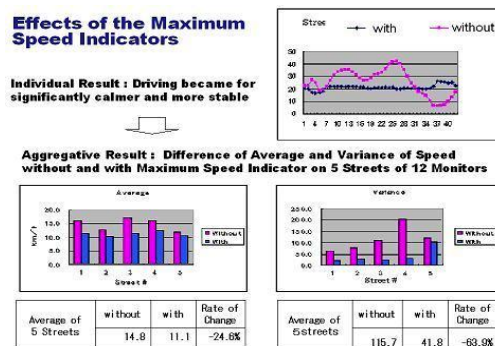


Figure 4 Effects of Maximum Speed Indicator

Performance of Maximum Speed Controller and GPS-Digital Map (ISA) System

Maximum Speed Controller and GPS-Digital Map worked well as expected.

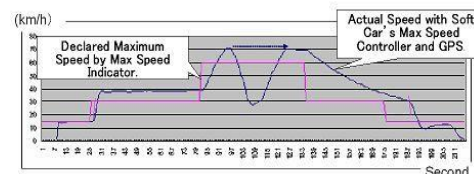


Figure 5 Performance of Maximum Speed Controller and GPS-Digital Map

2-4. International Exchange

After starting the Millennium Project, it was found that European and Australian experts were conducting trials of ISA (Intelligent Speed Adaptation) and the authors started exchanging

information with them. Paper presentations and panel discussions on Soft Car Project were made at ITS World Congress in Sydney 2001, in Chicago 2002, in Nagoya 2004, in San Francisco 2005 and in London 2007.

In 2001, Soft Car demonstration was conducted in Malacca, Malaysia as a special program of PRCUD (Pacific Rim Council of Urban Development) Annual Round Table Forum (Figure 6). The discussions at PRCUD were made in Chiba/Tokyo 2000, in Palembang 2003, in Nanjing 2004 and in Jakarta 2007.

2-5. Expo Aichi 2005 and Soft Car EXPO Caravan

In 2005, electric vehicles with Soft Car Systems (Soft Q Cars) appeared in Expo Aichi in everyday parades. With a Soft Q Car, the author visited city mayors, elementally schools, etc. throughout East and West Japan in the Exposition period (Figures 7 and 8).



Figure 6 Soft Car Demonstration in Malacca, Malaysia, 2001

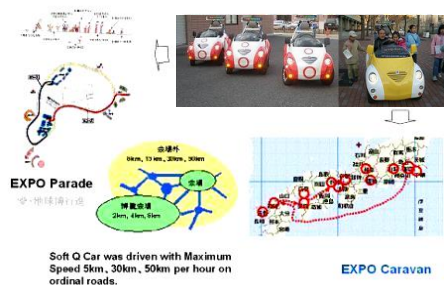


Figure 7 Expo 2005 and Expo Caravan



Figure 8 Expo Caravan, a Message to China Pavilion and Media Publicity

3. Contacting with Families of Road Traffic Victims

Soft Car was accepted well in general, and outcomes of the project have been presented at various occasions both in Japan and abroad. Frequent media reports were made. In spite of these achievements and positive responses, the Project has not been successful enough to let governments enforce drivers to install Soft Car Systems on their cars and to let car manufactures produce Soft Cars.

In summer of 2006, the author started to report cases of road crashes in his blog, “Soft Car Diary (<http://blog.livedoor.jp/oguriyukio/>)” and to contact families of victims of car crashes. The author and his students started “Soft Drive” campaign (Figure 9) and conducted “collision avoidance test” in the fall of 2006 (Figure 10).

The author also started an internet BBS, “Meeting Plaza for the World Day of Remembrance for Road Traffic Victims (<http://9005.teacup.com/worlddayfortrafficvictims/bbs>)” in November 2007. The background of the start of the BBS was a resolution at the 38th Plenary Meeting of the United Nations to “Invite Member States and the international community to recognize the third Sunday in November of every year as the World Day of Remembrance for Road Traffic Victims as the appropriate acknowledgement for victims of road traffic crashes and their families (resolution 60/5 of 26 October 2005).”

Via the blog and the BBC, deep grief and anger of the victims were shared, network of people who needed support and who were willing to support was constructed. Further, inappropriateness of legal system for road traffic and measures to overcome the traffic tragedies were discussed. People gathered there started to show their support to Soft Car. Mass media started reporting the author’s communication with the victims and the Project (Figure 11).



Figure 9 Soft Drive Sticker



Figure 10 Collision Avoidance Test



a. Asahi Shinbun, March 29, 2008



b. Mainichi Shinbun, April 9, 2008



c. NHK, May 24, 2008

Figure 11 Media Publicity in 2008

In August of 2008, the author started communicating with RoadPeace, a charity organization whose activity led the UN assembly resolve to designate the World Day of Remembrance in 2005. The coming World Day events in Sapporo, Tokyo and Osaka on and around November 16 2008 will be held with world wide network. Please see <http://www.worlddayofremembrance.org/>.

4. Toward Healthy Cities with Soft Cars

In April 2008, the author received a permission of daily demonstration of Soft Q Cars in the campus of CUC, and he, with his students, is currently contacting citizens and officials of City of Ichikawa to develop a plan to utilize Soft Cars in the city with the CUC campus as its core. Once they can develop a “Soft Car Zone” in Ichikawa, information of how to successfully develop such zones can be shared globally.

Through his contact with victims as well as from his experience in the field of city planning, the author understand that “Soft Car Only Policy” dose not work and is not effective to develop healthy environment of communities even when road traffic is given special attention. What are needed are, beside speed calming measures: sound legal basis of speed enforcement; anti alcoholic driving measures, severer legal punishment on dangerous driving, disclosure of police inspection, audio and video drive recorders; safer traffic signal systems; and others. We also have to warn car and electronic manufactures not to produce and sell dangerous cars, and have to advice governmental and business people to change of policies of ITS (intelligent transport systems). This eventually will us to skepticism about whether automobile based society and economic development is sound for humanity. It is important to restructure the societies into the ones which are less dependent on cars and more pedestrian, cycles and mass transportation based. This view is especially important for developing countries where car ownership and road construction can quite likely be seen as the symbol of prosperity, which proved to be a mirage with huge sacrifice.

The author is going to publish his book of *Post Speeding Society* with these views and experience of Soft Car Project, beside advocating to develop Soft Car Zones anywhere in the world. Partnership with people of good will for healthy cities is the author’s wish.



Figure 12 Author’s Coming Book of *Pos Speeding Society*

ⁱ This abstract is an extension of the author’s paper of “Viewing Traffic Safety Issues from Victims’ Standpoints -Developing Wider Social Acceptance of Safe Speed Initiatives” presented at ICTCT (International Co-operation on Theories and Concepts in Traffic Safety) Extra Workshop, Beijing, held in April 2007. Readers are able to download the paper at <http://www.ictct.org/>.

ⁱⁱ World Health Organization and World Bank [2004] *World Report on Road Traffic Injury Prevention*, edited by Margie Peden, Richard Scurfield, David Sleet, Dinesh Mohan, Adnan A. Hyder, Eva Jarawan, and Colin Mathers.