Viewing Traffic Safety Issues from Victims’ Standpoints - Developing Wider Social Acceptance of Safe Speed Initiatives

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Abstract

This paper first describes the “Soft Car” project initiated by the author and his associates as one of the “Safe Speed Initiatives”. The target of the Soft Car project and Safe Speed Initiatives is reconsidered, and actions taken based on this reconsideration, especially contacts with victimized families, are described. The author argues that victims’ standpoints are essential to develop genuine traffic safety measures. As concluding remarks, the author says that the nations which are currently experiencing rapid economic growth should seek alternative growth path which is associated with less or no sacrifice adopting “Safe Speed Initiatives”. He also says that China can and should play her role as a leading country to adopt “Safe Speed Initiatives”. Coming Beijing ITS World Congress (2007), Beijing Olympic Games (2008) and Shanghai International Exposition (2010) are excellent opportunities of demonstrating “Safe Speed Initiatives” and the author is ready to work with Chinese experts in collaboration with of European and Australian experts.

1. SOFT CAR PROJECT

1-1 Concept and Development

The author and his associates have been conducting the Soft Car Project both in Japan and internationally, exchanging information with ISA (Intelligent Speed Adaptation) experts in Europe and Australia (Figure 1).

The Soft Car is about fitting regular cars with ISA technology to encourage drivers to limit themselves to a safe, ‘soft’ speed. The concept emerged in 1982 independently from ISA, but is a type of ISA car with an additive equipment, i.e. Maximum Speed Indicator, which indicates four (4) levels of maximum speed either chosen by driver manually or set automatically. It utilizes GPS and digital maps with four (4) different coloured lights to the driver and to anyone viewing the car and excess of speed limit is identified by a flickering of the lights (Figures 2 and 3).

The system which turns any existing car into Soft Car is composed of three (3) types of equipment; i.e., (i) Maximum Speed Indicator; (ii) Maximum Speed Controller; 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 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.
1-2 Developing Soft Car System and Tests of Its Performance

In 2000, with three (3) years Millennium Project research fund of the Japanese Government, developing equipments for Soft Car System, and experiments in the community next to Chiba University Commerce (CUC) in City of Ichikawa, Chiba and in a driving test course in Tsukuba demonstrated appropriate performance of the system (Figure 4, 5). Questionnaire surveys proved high acceptance of Soft Car by various types of people.

1-3 Participation to Expo Aichi 2005 and Soft Car Expo Caravan

Three (3) Soft Q Cars were used for everyday parades in Expo Aichi 2005, regulating their maximum speed to 2km per hour. In the Exposition period, Soft Car Expo caravan was undertaken to visit city mayors, elementary schools, etc. of west Japan with a Soft Q Car and it was well received. The caravan eventually arrived at Expo site, and a message was handed to an officer of Chinese pavilion (Figure 6, 7).
1-3 International Development

After starting Millennium Project in 2000, authors started contacting European ISA experts. They first visited Professor Christer Hydén, Professor András Varhelii and their associates at Lund Institute of Technology with Professor Shungi Taniguchi of Sugiyama Women's University, experienced ISA car drive and exchanged information.

The Author also started participating ITS World Congresses. At a special session of “Speed Adaptation for Safe and Livable Community” in ITS World Congress Nagoya 2004 which was chaired by the author, the panelist developed a concept of “World Wide Platform of Safe Speed Initiatives” to enhance exchange among experts who conducts projects related to safe speed.

In the annual forum of Pacific Rim Council on Urban Development (PRCUD), the author presented Soft Car project in various formats. Soft Car demonstration in Malacca, Malaysia in 2001 was one of such events.

1-4 Self Evaluation

The equipments of Soft Car System were well developed, and their performance was satisfactory. Soft Car was well received by people and media attention to Soft Car especially in the occasion of Expo caravan was quite extensive. However, the project has not yet influenced manufactures to produce Soft Cars and persuaded governments to enforce drivers to install Soft Car System on their cars.

2. STARTING IT OVER

2-1 Targets Revisited

The author realized that they should revisit essential target their project, which was to make our community safer and livable, or more specifically to make cities less dependent on cars and to decrease traffic death and injury and make them less serious.

The author and his friend students of planning in Tokyo started to advocate “pedestrian promenade” against road widening plan in 1969 in the central area of Mizunami, Gifu, a city of 40,000 population, author’s home town. It was author’s first proposal to restructure the relationship between automobiles and cities.

The concept of Soft Car emerged in Tsukuba Academic New Town. Tsukuba is located about 60 km’s to the north of Tokyo, which started to be planned and constructed by the Japanese government in the early 1960s, which was the period when Japan was developing with high economic growth rate and everybody believed automobiles were the symbol of wealth and they can develop their future with automobiles. Thus, Tsukuba was developed as a town totally dependent on cars isolated from existing urban areas. Traffic accidents occurred everyday either on very wide avenues of the New Town or on narrow country side roads in the outskirts of Tsukuba.

In 1982, when one student was killed and four (4) others were seriously injured in Tsukuba with drunk driving, the author, an assistant professor of Tsukuba University then, started a
campaign to suggest drivers to take “soft drinks”. The campaign was named “Soft and Safe Tsukuba ’82”. The concept of “Soft Car” emerged in this campaign and “Soft” of “Soft Car” taken originally from “soft drinks”.

Author’s elder sister was killed in 1997 by a car driven by a middle aged lady in Nagoya area. We could not get any information on the police report. This was because police were too busy handling too may traffic accidents, and his sister’s death was just one of many “small” accidents. This made him determined to develop Soft Car, and he received the Millennium Fund in 2000 to actually develop Soft Car.

### 2-2 Surveying Traffic Environment for Schooling Children

Author started researching traffic environment of the roads used by pupils of an elementary school next to CUC. The road which reaches the main gate of the school is about 5 meters in width, no pedestrian both way, the maximum speed of which is 20 km/hour, and, more importantly, road is within “School Zone”, a zone designated by police office into which no cars are allowed to enter except local residents in the morning schooling time. In spite of these restrictions, we knew that massive amount of cars of especially commuting ran into this road at high speed in the morning, and children walk on narrow space between road side buildings and cars, and they sometimes wait on road side to let cars go through (see the pictures of Figure 9).

The table of Figure 9 shows the result of the observation conducted in the morning of a day in June 2005 by the author and his students. It tells that even in an hour of morning schooling time, 368 cars entered the road, more than half of the drivers violate legal maximum speed and maximum speed observed was close to 40 km/hour. Many bicycles and bikes entered this street. Dangerousness for children was quite apparent.

The principle of the elementary school, the president of a local taxi company and others understood the necessity of calming down the speed of cars on the road. Installing Soft Car equipments was not carried out because, among others, to communicate with incoming drivers which came from wide area was not possible.

### 2-3 Reporting Cases of Traffic Accident on a Blog

In April of 2005, a blog named Soft Car Diary (<http://blog.livedoor.jp/oguriyukio/>) was opened by the author essentially to provide information on Soft Car Project. It received infrequent comments.

In summer of 2006, he started to report cases of traffic accidents utilizing news by mass media and internet. Reporting accidents on the blog became a everyday task of the author. The blog has gradually become a forum for families of victims, concerned citizens, experts of traffic safety, planning, etc. and the author’s new direction to develop Soft Car Project was found.

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Figure 9  Traffic Environment for Children of Mama Elementary School, Ichikawa, Chiba

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Figure 10  Shift of the function of Author’s Blog with Reporting Cases of Traffic Accidents
Case 1: Three Children Killed by a Drunk Driver in Fukuoka

At night of August 25, 2006, a sport utility vehicle driven by a family of five members was hit by a car which was estimated to be running at speed of 100kms per hour on a bridge, fell into sea and three (3) children were killed. The driver was arrested and found drunk. Massive media report was made on this case, and anti-drunk-driving campaign started throughout Japan. Police Agency of the Japanese government started to change the Road Traffic Law to punish drunk drivers with heavier penalties.

The author wrote his articles on his blog and made access to an officer of the City of Fukuoka who supported citizens gathering against drunk driving. Various materials on local activities against drunk driving started to be sent. The author met a leader of the community of Fukuoka where criminal driver had his permanent address, and found that the community people were feeling responsible to the tragedy because drunk driving has been rather daily habit of the community. The author has not contacted the victim’s family yet.

Case 2: Four (4) Kinder Garden Children Killed and 17 Others Injured by a Speeding Wagon in Kawaguchi, Saitama

On September 25, four (4) kinder garden children of ages 3, 4 and 5 were killed and 17 others were injured by a speeding wagon on a street of 6 meters width in City of Kawaguchi, next to Tokyo. There was no speed limit sign on the road. The ordinance under the Japanese Road Traffic Law stipulates that maximum speed of the road with no speed sign is 60km/hour. There was a serious distortion of legal maximum speed under existing Traffic Law and Ordinance of the Japanese government (Figure 12). Under this distortion, even the speed of the car which killed and injured children estimated by inspectors was between 50 to 55km/hour, the driver was regarded not to have violated the Traffic Law. Ms. Izumi Takahashi, an architect and mother of two small girls expressed her anger by a mail sent to the author. The author posted Takahashi’s mail on his blog and they started exchanging their opinions.

Two month later, a TV news showed a crying face of one of the fathers whose daughters were killed in the disaster. It was Mr. Sada’aaki Fukuchi, and he said on TV “Why this country is so ridiculous? Please help us!” The author then posted a new article apologizing that he had not contacted Mr.Fukuchi, but would be a help. It was to tell author’s determination to himself. Four days after the posting, a comment from Mr. Fukuchi on the blog surprised the author, which said “I want to change the Japanese law with people like you”. Mr. Fukuchi and other parents of victims wanted to change existing law and to punish culpable drivers more severely.

Through the dialogue with Mr. Fukuchi, the author understood inadequacy of traffic-accident-related-clauses of the Criminal Law of Japan. A clause of the Criminal Law is to
punish the criminal driver with a maximum of five (5) years imprisonment by regarding the causality is by error of the driver (which is referred as “erroneous clause”), and another clause of the same Law is with a maximum of twenty (20) years imprisonment (which is referred as “ill-intention clause”). Even when the injury is very massive, in most of the cases, erroneous clause is applied and the ill-intension clause is rarely applied. In case of Kawaguchi, the erroneous clause was going to be applied and victim’s parents were angry.

The author is not a legal expert and did not know precisely how the tragedy happened. He therefore posted the arguments and activities of Mr. Fukuchi, showed author's learning process of the Japanese law, and concerned citizens started to write their opinions in the blog of Soft Car Diary.

Mr. Fukuchi and other victimized parents eventually collected more than 210,000 citizens’ signatures to ask Japanese government to punish the driver with “ill-intension clause” and to change existing Criminal Law. Although the criminal driver was sentenced to be imprisoned five (5) years with erroneous-clause, this case had strong impacts on legal system of road traffic. Police Office of Saitama prefecture took a quick action to impose 30km per hour maximum speed limit to all the roads of no speed signs of the area of about 85 hectares including accident site in Kawaguchi city. The mayor of Kawaguchi started to explore the way to turn his city into a special district where legal maximum speed would be 30km per hour. Ministry of Law started to examine to add a new clause to the Criminal Law to imprison a culpable driver seven (7) years maximum.

Case 3: A Daughter of a Young and Popular Actor Killed at a Cross in Tokyo

A daughter, named Emiru, of a young and popular actor, Mr. Shigo Kazami, was killed at the age of 10 on January 17, 2007 at a crossing in a Tokyo residential area. This accident was widely reported. Mr. Kazami had his blog and started to write on the death of his daughter and his grief. Many fans, especially young mothers, wrote comments regretting the death of Emiru and the fear their children can be sacrificed someday. There also were many mothers who shared that they also lost their children and how sad they were.

The author sent comments to Mr. Kazami especially referring the author's contacts with Mr. Fukuchi. Mr. Kazami responded to the author with his message, which said that “I want to save 10’s, 100’s and, if possible, 1000’s of young lives in place of the life of Emiru”. This message was conveyed to the reader of Soft Car Diary. The author mentioned in Mr. Kazami's blog that he was going to attend ICTCT Special Workshop in Beijing, and would talk on Emiru's death as well as the death in Fukuoka and Kawaguchi. Mr. Kazami responded to the author saying that “Emiru might be in Beijing when the meeting is held” which impressed the author. With this process, both blogs of the author and of Mr. Kazami have become forums of victimized families, concerned citizens and experts of planning and traffic safety.

3. NEW PERSPECTIVE AND NEW ACTION

3-1 New Perspective

Having started the project over again, the author acquired new perspectives for further developing the Soft Car Project.

(1) Victims' sorrow is so deep and so widely shared by concerned people as well as those who have the same experience. In many cases, experts of traffic safety and planning behave
like medical doctors who do not know anything about patients. Experts should be close to victims’ standpoints as much as possible when they contemplate safety measures.

(2) Victim’s families usually do not have any expertise of transportation planning or traffic safety measures. Having sympathy with them, listening to their grief and letting them speak out are very important. Because of their deep concern, they become experts very quickly. Experts should work together with victimim’s families to acquire and understand information which is necessary to cope with the situation without limiting themselves within their professional fields and/or within their domains of their already acquired knowledge and interests. In this process, concerned citizens and experts of other field start to come together and network of people is formed. This network may first be of emotion, especially of grief and anger. However, in this network, such target as “how not to sacrifice small lives” may be widely shared. This network will gradually grow to the one of knowledge and wisdom.

(3) Working with victims with above stated manner, experts will naturally be led to a view that various approaches have to be combined together to understand the situation of tragedies and to cope with such situation. Comprehensive approach is necessary. In case of the author, because of his engagement in Soft Car project, when he faced traffic accidents, first concern was how fast he criminal drivers were running. Speeding was in most of the cases very harmful, but it was not the only factor of crash. Drinking, community habits, carelessness and/or harmful character of the drivers, malfunction of speed regulation, visibility from driver's sheet, all of these were the factors which contributed to the accidents. To cope with the accidents, Soft Car System may work, but such system is not in the hand of people, and will work only with other safety measures. If the experts who are interested in Safe Speed Initiatives only advocate necessity of speed control mechanism, Safe Speed Initiatives may not well accepted by people nor may work isolated from other measures.

(4) On the other hand, it is important to notice that installation of system of maximum speed indication and control of Soft Car and ISA is not in the scope of victimized families and concerned citizens and of most of the experts of traffic safety. Experts of Safe Speed Initiatives should; first, be confident in their technology, acquire more data to show the effectiveness of the system, and work for the improvement of their systems; and, second, be patiently persuasive to let victim's families, concerned citizens and experts of traffic safety understand the importance of Safe Speed Initiatives. Once the network of emotion, knowledge and wisdom and the people’s understanding of the importance of Safe Speed Initiatives merge, people of good will will gain unbeatable power to push motor companies and the government to adopt their genuine safety initiatives.

3-2 New Actions

In accordance with above stated perspectives, the author and his associates started to take new actions since last fall.

(1) “Soft Drive” campaign started. This is to advice drivers to drive their cars with calm speed, especially in narrow streets at the level of 15 km per hour. Pamphlets and stickers started to be distributed to drivers at the time when they hold events of Soft Q Car driving.

(2) Drive collision test was undertaken in December of 2006. Balls were used as virtual pedestrians who abruptly run into streets. A test course of 2.75 meters width was made on a river bank and 3 walls on both side of the course (6 walls in total) were prepared to hide balls and throwers. A ball was thrown slowly to the centre line of at the time when the car passed a line from where the driver was able to see the ball 10 meters in front. Soft Q Car was driven at 30km per hour and 15kms per hour by test drivers. The test drivers didn’t
know from which wall the ball was going to be thrown. The result of this test showed that:

at 30km per hour speed, out of 28 trials of 20 test drivers, only 4 trials (14.3%) perfectly avoided collision; while at 15km per hour speed, all the trials avoided the collision. This test verified a simple but significant fact that when a car runs fast, there is a big chance of collision, and at low speed, driving is much safer.

(3) In January of 2007, Police Agency of Japanese Government had an opportunity to here public comments for changing Road Traffic Law especially to increase the penalties on drunk driving. The author sent his comment to the Agency, pointing the distortion of speed limit, Road Traffic Ordinance should be changed so that speed limit for the streets without speed signs become from 60kms per hour to 30kms per hour.

(4) Carelessness of drivers is an important factor causing accidents. The author found City of Ichikawa, where CUC is located, was testing a computer mapping system with which citizens are able to indicate hazardous points on map of the city. The author and his associates started to examine the technical feasibility to combine Soft Car System and this mapping system to warn drivers hazardous points indicated by citizens and this warning is visible for those out of the cars.

(5) The author’s book titled "Post Speeding Society" (in Japanese) is in process of publication in the fall of 2007, which will describe the philosophy and practice of Soft Car. The author is currently writing a booklet whose title is "I am a Wind and Your Child." This is to convey readers deep sorrow of victimized families from the standpoint of a child killed by an accident and to share the emotion.

(6) The author acquired ownership of three (3) Soft Q Car’s used for Expo parade in addition to one (1) used for Expo Caravan (See Figure 6).

(7) The author and readers of Soft Car Diary started to discuss on the effectiveness and feasibility not to terminate issuing driver’s licence to the drivers who committed criminal driving causing death and severe injuries.

4. Concluding Remarks

The author acquired new perspectives how to further develop Soft Car project and Safe Speed Initiatives, especially through his contact with victim’s families. He also started new actions.

In spite of the efforts for Safe Speed Initiatives in Europe, Australia and Japan, there is a long way to go to implement them. This is essentially because automobiles have played a vital role in industrialization and in economic growth of the 20th century, and speed and freedom have been regarded as the most important merits of cars. Sacrifices, i.e. death and injuries, have been regarded inevitable for the merits of automobiles. Many people regard that mechanical speed regulation is to kill the functionality of cars.

This view is wrong. A car works better with slower speed in streets where pedestrians, bicycles and automobiles are mixed. Before stopping a car, its speed has to be slow down.
Driving an existing car without speed control is to accelerate and decelerate quite often, and driving becomes unstable and dangerous, while driving with a car with speed control mechanism is much more stable, safe and does not increase travel time. These are the most significant findings out of the projects of Soft Car and ISA, and have significant and long-run implication that we can achieve better life with much less sacrifices.

Worship of automobiles, and the sense of inevitability of sacrifice, is deeply embedded in the mind of people who pursue growth and richness. More analysis should be done to verify the merits of Safe Speed Initiatives. On the other hand, we should know more about how deep the grief of sacrificed people, and experts of traffic safety should work together with victim’s families. This is the essential message which comes out of the author’s experience and is described in this paper.

This discussion is of significant importance for nations who are experiencing high economic growth and car ownership and usage is increasing dramatically. In the period of economic boom, people tend to pay more attention to growth and leave to safety, i.e. decrease of death and injuries. Most of the developed countries have such experience, and Japan is one of those. Although the number of people killed by traffic accident has been decreasing significantly, number of accidents is still increasing. The cities and regions of Japan have been remodelled with construction of road and development of residential area, much of nature and traditional community have been destroyed, and many people of good will are wondering what economic growth is for. Japan is suffering from the aftereffect of rapid economic growth. Even though the number of children killed in traffic accidents has significantly decreased, grief of victims’ parents shown to public has become deeper and more widely shared by people. Massive media attention, people’s concern and government reaction described in three cases in this paper reflect such state of mind of people.

The nations who are currently experiencing the dramatic growth of car ownership and usage is on a diverging point of whether they take a path of growth with big sacrifice or growth with less or no sacrifice. Reasonable choice is apparent. Paying attention to safety will create new business. Growth with less or no sacrifice is possible, and the author strongly suggests that developing countries should take advantage being able to see what happened in the process of growth in the 20th century and to choose alternative path.

China, which is becoming a super power of the world, can and should play her role as a leading country to take Safe Speed Initiatives. The author is willing to collaborate with Chinese people in cooperation with European and Asia-Pacific experts. The author believes that ITS World Congress Beijing in 2007, Beijing Olympic Games in 2008 and Shanghai International Exposition in 2010 will be excellent opportunities for Chinese people to demonstrate their willingness to take a leadership of Safe Speed Initiatives, and he wishes to further continue this discussion.

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References


Oguri, Yukio[2004] “Maximum Speed Indication and Control of Soft Car for Safe and Livable Community” Proceedings of 11th World Congress on ITS, Nagoya CD-ROM


Notes

i The patent of “Soft Car and Safe Traffic System” was applied with the patent number 2000-267599 by the author. Usage of the Soft Car concept and system will be illegal. Readers are able to access a CG animation of Soft Car at http://www.youtube.com/watch?v=w2bHQy-KvTc.

ii Soft Car project was introduced by Carsten [2004] as “a project whose concept is essentially that of ISA” at Parliamentary Advisory Council for Transport Safety (PACTS) Conference, London in February of 2004, whose theme was “Targets 2010: No Room for Complacency”. On the PACTS Conference, see http://www.pacts.org.uk/index.html. To overview ISA, see Carsten [2004] and Warner[2006].

iii The electric vehicles on which Soft Car System was a product of a toy manufacturer Takara, and product name was Q-Car. Name of Soft Q Car comes from this.

iv Participants were Ken-ichi Yoshimoto (Dr.Eng., Professor, Saitama Institute of Technology, Emeritus Professor, University of Tokyo, Japan), Sadayuki Tsugawa (Dr.Eng., Professor, Meijo University, and Invited Research Fellow, National Institute of Advanced Industrial Science and Technology (AIST), Japan), Michael Regan (Ph.D., Senior Research Fellow, Accident Research Centre, Monash University, Australia), Craig Morrison (MBA, Managing Director, Sentinel Geo Systems Pty Ltd, Australia), Torbjörn Biding (Swedish National Road Administration and Chairman of the Steering Committee of SpeedAlert, Sweden), Vincent Blervaque (Project and Development Manager, ERTICO, Coordinator of SpeedAlert Project and PREVENT Subproject MAPS&ADAS, EU), Andras Varheili (Professor, Lund Institute of Technology) and the author. The blog of “World Wide Platform of Safe Speed Initiatives” is accessible at http://ssi2006.blogspot.com/.


vi Readers are able to access a movie of schooling kids taken in this survey at http://www.youtube.com/watch?v=cq34vu38KHM.