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IRU Position

IRU POSITION ON THE ECONOMIC AND ENVIRONMENTAL ASPECTS OF INTELLIGENT TRANSPORT SYSTEM (ITS) APPLICATIONS

Unanimously adopted by the IRU Commission on Economic Affairs.

IRU Position on ITS applications.

I. ANALYSIS

Today, in the age of globalisation and technological revolution, Intelligent Transport Systems (ITS) have become part of our everyday life. Navigation devices show the easiest routes, advanced in-vehicle technologies such as driver assistance systems help to avoid accidents, overhead signs with static and changeable messages are used to manage traffic flow and communicate incidents, and, lastly, electronic payment and fee collection services are widely used.

Generally speaking, there are many opportunities for the development of ITS technology beyond the abovementioned examples. However, there is also a potential threat that different technologies and solutions would be used for governmental control and as a tool for neo-protectionist measures.

1. Definition of Intelligent Transport System (ITS)

According to a widely accepted scientific definition by Booze Allen, Hamilton and Rose of 1998, Intelligent Transport Systems (ITS) is generally described as the integrated application of advanced technologies, such as computing and communication technologies, to improve the transport system by making it more efficient, safer and sustainable.

ERTICO, the leading private/public partnership organisation on ITS, describes it in more simple terms: ITS is a system that integrates information and communication technology with transport infrastructure, vehicles and the user.

2. Economic and environmental impact of ITS applications

Commercial transport and today's just-in-time logistic operations both depend on reliable, predictable delivery times. Unforeseen delays have a great impact in terms of additional transport costs, increased energy use and emissions. Therefore, ITS applications are considered to be a valid and supporting way to manage and operate transport services.

Looking now at the overall impact analysis of all ITS applications it becomes clear that these data do not exist. Only for selected applications such as traffic management systems can one find an impact assessment. For this special case they can be summarised as follows:

- the efficiency of road capacity without new construction increases by up to 20%,

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- travel time savings of up to 40% are possible,

- vehicle emissions can be reduced by up to 50%.

3. Impact on the transport operator

As shown above, traffic management systems provide a clear economic and environmental benefit to the transport operators. In addition to that, many governmental representatives and ITS developers refer to other ITS features as benefits, too. The most quoted benefits are:

- ITS helps in scheduling vehicles,

- ITS helps to optimise routing for normal and abnormal transport (dangerous goods),

- it helps in monitoring safety and security related data,

- it can be used for tracking and tracing of commercial vehicles,

- it provides support for the automation of the commercial and regulatory documentation that accompanies heavy commercial vehicles and

- it is the provision of an “office in the cab” for vehicle drivers.

Certainly, these features can provide added value to transport operators, mainly to medium and big size companies, however, during discussions with Governments and ITS providers the negative effects are rarely communicated. Especially the question of who provides and controls what is not properly addressed.

4. ITS and vehicle manufactures

Currently, vehicle manufacturers offer most in-vehicle technologies as options which would be the right approach. However, to recover development costs faster, vehicle manufacturers now argue vis-à-vis governments that in-vehicle ITS technology must become a mandatory standard. To persuade governments of this, they argue that these new ITS applications allow governments to control, track and trace all vehicles and operations at all times.

5. Opportunities and challenges

Following the IRU 3 “i” strategy for achieving sustainable development, based on innovation, incentives and infrastructure, the IRU and its Members have always been in favour of the latest innovative technology, such as ITS applications, to reduce the environmental impact of road transport. However, governments should provide real business incentives to transport operators to introduce these latest technologies on a voluntary basis.

In terms of evaluating ITS applications, the challenge is to find the fine balance between optimal use of ITS applications, aiming at improving road transport operations, and their potential misuse by governments to control and interfere with operations of commercial vehicles. In this context many questions regarding the freedom of choice of the most optimal transport mode and route, and issues of data protection are unsolved.

The lack of internationally agreed and harmonised ITS standards and the hundreds of non-compatible applications could prove to be another obstacle to further facilitation of road transport. It could even become a tool for neo-protectionism of national markets, which would not be a new development. Since the early nineties the road transport industry has been confronted with long waiting times at borders to due inefficient procedures. This led to the birth of the slogan that the “iron-curtain” had been replaced by a “paper curtain”. Justified with national ITS applications there is now a potential danger that we are soon going to enter the age of an “electronic curtain”.

Bearing this in mind, a few good and bad examples of ITS applications follow:

Examples of good use:

The traffic management on highways close to Frankfurt a.M. (Germany) is a good example, where during certain peak hours the escape lane is opened to heavy commercial vehicles in order to reduce congestion. This can lead to an increase in effective road capacity without new construction by up to 20%.

Another good example is a GPS based Fleet Management System. To use this system transport operators have to invest into additional computer hardware and system maintenance but they can save on monthly expenses such as salary, vehicle expenses, fuel and maintenance. According to industry statistics and feedback from customers the monthly savings are at around 5% per driver.

Examples of misuse:

Currently the UN is working on a legislative proposal on tracking and tracing of dangerous goods. The purpose of this proposal is to track and trace dangerous goods vehicles at all time, provide them with mandatory routes, ask transport operators to use a certain mode of transport for certain routes and potentially fine them if they do not comply.

In the US, the department of Homeland Security has access to all ITS applications in order to provide maximum control of all vehicle and fleet operations, without the operator being aware of this.

Another example is the Kent, Birmingham and Munich ITS system, where emissions on the streets are monitored under and certain conditions trucks are not allowed to use certain (for transport operators optimal) routes.

II. IRU POSITION

Following on the IRU three “i” strategy for achieving sustainable development, based on innovation, incentives and infrastructure, the IRU and its Members are in favour of ITS applications as long as they provide significant benefits and facilitate road transport.

However, these applications must be internationally standardised, harmonised and interoperable in order to improve effectiveness, profitability and reliability of road transport and they should not be used as a tool for neo-protectionism.

Furthermore, the use of ITS applications must be on a voluntary basis so that the consignor, carrier and consignee maintain freedom of choice for the means of transport they use and authorities should not have systematic access to company and vehicle data.

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