



EUROMCONTACT, EFCLIN, EUROM I, ECOO

## **Response to the Public Consultation on Driver Training and Traffic Safety Education**

June 19, 2009

### **Introduction**

The European trade associations active in the optical field<sup>1</sup> are pleased to have the opportunity to respond to the public consultation on driver training and traffic safety education. We hope that its outcome will result in concrete actions to improve the road safety in Europe by implementing measures that improve not just competence and experience in driving, but also physical fitness to drive, including good visual acuity. From both statistical and intuitive perspectives, eyesight has an enormous impact on driver safety.

### **Road safety and the importance of eyesight**

We welcome the recent initiative of the European Commission to address road and driver safety. Whilst driver safety is an integral part of measures such as Directive 2006/126/EC on Driving Licenses, there remains much room for both better implementation of existing law and further action to improve safety on Europe's roads.

In 2001, the Commission established the goal of a 50% reduction in driving fatalities by the year 2010. While considerable progress has been made (a 20% reduction by 2007), continued efforts are required to meet this demanding goal. In 2007 alone, 43,000 people died in road traffic accidents in Europe, a number comparable to five medium-sized passenger planes crashing each week. By a rough estimate, cars have killed more people since they were invented than all the wars fought over the same period.<sup>2</sup> The economic costs of accidents are also high. For example, research by the ISTAT estimated that the cost of Italian road accidents in 2007 equalled 2% of their GDP.<sup>3</sup>

The consultation paper correctly recognizes the magnitude of the traffic safety problem, and proposes thoughtful and effective solutions. We commend the suggestions proposed and welcome the recognition that "personal and contextual factors play an important role in the road user's behaviour". Nevertheless, the paper does not make reference to the medical condition of drivers, nor address the importance of physical fitness in driving competence, especially with regard to adequate eyesight.

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<sup>1</sup> EUROMCONTACT, EFCLIN, EUROM I, ECOO

<sup>2</sup> "The Importance of Precise Sight Correction for Safe Driving," Silvio Maffioletti, Renato Pocater, and Silvia Tavazzi, the Università degli Studi di Milano, January 2009.

<sup>3</sup> Ibid.

- **Eyesight is a parameter which plays a crucial role in safe driving and at the same time can be easily and cheaply controlled.**
- **Eyesight checks vary widely between different Member States, with enormous scope for greater coordination, harmonization and sharing of best practice.**

### **The role of eyesight**

Inadequate eyesight is a frequent contributor to the 1.3 million road accidents that occur in Europe each year. Intuitively, eyesight significantly affects driving. Any driver can attest to the importance of being able to see clearly and precisely! Indeed, 90% of necessary decisions and movements while in a car rely on the eyesight of the driver.<sup>4</sup>

Driving with good vision is less tiring and also lets people hear better. The condition of hyperopia may allow the young to see sufficiently despite the error, but it is a condition which often causes migraines, tiredness, headaches, and avoidance of reading. The less severe forms of this condition reveal themselves in the mid to late 30s and, when corrected, the person is more relaxed. Cataracts, which cause decreased visual acuity, susceptibility to glare and decreased contrast sensitivity, are a significant and growing problem as the population ages. In the US, the traffic fatality rate at night-time is 3 times higher than at daytime, part of which could be attributed to night vision issues.<sup>5</sup> Even the colouration of sunglasses should be chosen with care and supervision for motorists with a colour vision defect (colour blindness).<sup>6</sup> Unfortunately, many drivers seem to remain oblivious to, or ignore, their insufficient vision.

Evidence often points to widespread visual deficiencies of many drivers.

The Association Nationale de l'Amélioration de la Vue (ASNAV) recently exposed hidden, large-scale sight problems in France. After testing 30,000 drivers, they discovered that **30% were unaware that they had a minor sight defect and 5% were unaware that they had very poor sight.**

At the Paris Motor show in 2008, ASNAV tested 2,000 drivers. **20% were recommended to visit an ophthalmologist, and a significant number had a binocular acuity below 0.5**, the level mandated by the Driving Licences Directive.

In another recent sampling of over 1,000 drivers, researchers at the Università degli Studi di Milano discovered that:

- 25% of drivers had inadequate night vision;
- 19% of drivers had inadequate visual acuity;
- 3% of drivers had inadequate binocular vision;
- 2% of drivers had inadequate colour vision;
- 2% of drivers had inadequate visual field

compared to the standards presented in the Italian Road Code. In all, roughly **one in three participants was identified as having deficient vision below the minimum requirements prescribed by law.** The study identified several other important visual criteria for driving

<sup>4</sup> "Au volant, c'est la vie," ASNAV, <http://www.asnav.org/auvolant.html>.

<sup>5</sup> "Passenger Vehicle Occupant Fatalities by Day and Night – A Contrast," Varghese et al, May 2007.

<sup>6</sup> Sunglasses, Traffic Signals and Color Vision Deficiencies, S.J. Dain, J.M. Wood, D.A. Atchison, School of Optometry and Vision Science, University of New South Wales and the School of Optometry and Institute of Health and Biomedical Innovation, Queensland University of Technology, Australia, April 2009.

(saccadic mobility, visual concentration, visual acuity with variable contrast, and cognitive disorders), discovering even greater proportions of deficiencies in these categories.<sup>7</sup>

Obviously, quantifying the exact influence of eyesight in causing accidents can be difficult since multiple factors contribute to many incidents. Nevertheless, several recent studies make clear the correlation between poor eyesight and unsafe driving and accidents.

- ISTAT data (2008) reveals the presence of a **direct causal link with visual perception in 59% of accidents.**<sup>8</sup>
- The Milan research found **sight disorders in around 70% of motorists with a medium/high “Accident Involvement Index.”**<sup>9</sup>
- A study in Australia found that drivers with mild and moderate simulated cataracts had their ability to perceive hazards significantly impaired, yet many people who develop cataracts in their eyes continue to drive for extended periods of time. 23% of an Australian sample of patients about to have cataracts removed had been driving illegally due to poor vision.<sup>10</sup>
- In the US, drivers with cataracts were 2.5 times more likely to be responsible for a crash over a 5 year period, even if suffering from a cataract in only one eye.<sup>11</sup>
- US drivers who underwent cataract surgery had accident rates 50% less than those who simply continued driving.<sup>12</sup>
- Reduced contrast sensitivity, caused by cataracts, affects hazard perception - known to correlate with crash risk. US drivers who have been involved in car crashes have been shown to be 8 times more likely to have poor contrast sensitivity in their worse eye than crash-free drivers.<sup>13</sup>
- In **Poland** the police conducted visual acuity tests in both Torun and Poznan on drivers involved in traffic accidents. They determined that insufficient vision was the second most important factor that caused these accidents.

Despite all this, nearly 1 in 5 drivers over the age of 50 are not having regular eyesight tests in Spain and the Netherlands. One in 2 British drivers does not have regular tests.

### **The value of eyesight testing**

Increasing road safety can be a large-scale project requiring large sums of money and concerted effort from policymakers. Training drivers and instructors, while necessary, entails long time commitments, huge sums of public money, and often complex public training infrastructure systems. Poor eyesight, on the other hand, is one of the factors most cheaply and easily able to correct and control. A simple, **validated eyesight test by a trained ophthalmologist, optometrist or optician** can easily and quickly address any vision problems and quickly create a safer driving environment. Up to 10% of drivers may see significant improvement in visual acuity when eyesight correction is adjusted.<sup>14</sup>

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<sup>7</sup> “The Importance of Precise Sight Correction for Safe Driving,” Silvio Maffioletti, Renato Pocaterra, and Silvia Tavazzi, the Università degli Studi di Milano, January 2009.

<sup>8</sup> “The Importance of Precise Sight Correction for Safe Driving,” Silvio Maffioletti, Renato Pocaterra, and Silvia Tavazzi, the Università degli Studi di Milano, January 2009.

<sup>9</sup> Ibid.

<sup>10</sup> “Poor eyesight causes bad driving,” European Council of Optometry and Optics, 23 January 2009.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> “Driver’s Vision Comes Into Focus,” <http://www.fmo.co.uk/news/article.asp?id=38>.

Many people delay or put off consulting an eye care professional when they notice reduced vision, or they may not notice gradual reductions over time. Given what we know about the proportions of drivers currently on the road without optimal eyesight, **eyesight checks of drivers would undoubtedly capture many undiagnosed cases in need of vision correction.** Clear guidance on this from the Commission would be very helpful.

Screening of vision is very **cost effective.** A pass/fail test by an eye specialist costs around €11 in Germany (not reimbursed, thus no increase in health insurance costs). This equates to about €1 each year of a licence's 10 year validity, a negligible cost. The ASNAV Barometer of visual health found that 91% of French citizens interviewed endorsed regular visual checks for drivers and are willing to pay a reasonable fee.

### **Application of the Driving Licences Directive: Mandatory vision tests**

The Driving Licences Directive (2006/126/EC) adopted in 2006 provides a basis for some progress. We would appeal to the Commission to monitor closely Member States' implementation of the fitness to drive aspects of this Directive and to encourage implementation before the deadline of 2013.

The Directive includes some important foundations for basic eyesight requirements. According to the Directive, driving licences will only be issued to applicants who have met the medical standards listed in Annex III.

Among the requirements in Annex III are some basic visual acuity requirements, including distance visual acuity (monocular and binocular), visual fields, and a red/green colour test. The Annex stipulates that all applicants will “undergo an appropriate investigation” to ensure that they have adequate visual acuity. When “there is reason to doubt that the applicant's vision is adequate, he shall be examined by competent medical authority. At this examination attention shall be paid the following in particular: visual acuity, field of vision, twilight vision and progressive eye diseases”. Specific standards are listed for the two licence categories.<sup>15</sup>

Clearly, there is scope for clarification regarding the meaning of “appropriate investigation” as basic, unscientific eye tests (for example, performed by the driving test examiner) can be very inaccurate and unfair. A competent professional is able to perform simple, accurate, **standardized and validated** tests and able to perform further examination where necessary as well as to advise about vision correction. Such tests are already mandated in Spain, Italy, Finland, Sweden, Denmark and the Netherlands.

Currently, drivers only need to fulfil the visual requirements of Annex III at the time of the first issuance of the licence. According to Article 7 of the Directive, the “renewal of driving licences when their administrative validity expires shall be subject to continuing compliance with the minimum standards of physical and mental fitness for driving set out in Annex III for

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<sup>15</sup> In considering further improvements to the standards in Annex III, we would draw attention to the advantages of considering the following:

- **Saccadic mobility**, a visual skill that drivers use to quickly alternate between objects in the field of vision (i.e. obstacles on the left and right sides of the road);
- **Visual concentration**, the ability to continuously focus eyesight and attention on the center of the field of vision;
- **Visual acuity with variable contrast**, the ability to distinguish between objects and obstacles when contrast is diminished (i.e. foggy roads);
- **Cognitive disorders**, or the ability to focus attention on multiple sources of input simultaneously (indirectly related to visual health).

driving licences” in the categories of C to D1E. For drivers in classes AM to BE (i.e. cars, motorcycles, etc.), however, it is at the discretion of Member States to apply the standards laid out in Annex III at the time of the renewal.

We believe that the Commission has a vital role in highlighting the benefits of requiring the vision standards of Annex III to be met for **both** licence issuances **and** renewals.

Renewals every 10 years for categories AM to BE would obviously capture more people in need of vision correction than a 15 year renewal period. Indeed, shorter periods ought to be specified for new drivers, for drivers with specific medical conditions, and for drivers over the age of 50. Deteriorating eyesight is a natural process that accompanies the ageing of our body. Eyes, even more so than many other parts of our body, can deteriorate rapidly. On average, young people receiving their licences for the first time will have healthier eyesight than the typical experienced driver. Unfortunately, many drivers stay on the road without vision correction even while their eyesight becomes gradually worse. Routine eye checks, therefore, are an absolutely necessary component of identifying drivers who require vision correction and thus to improvement of road safety. In fact, for many people, the physical requirements of Annex III could be more relevant and important upon each successive renewal of the licence than at the first issuance. Simple monocular visual acuity tests to be performed by the road police during routine controls together with a fine of non adequate vision will alarm all those drivers who drive without their correction as seen from the statistics stated.

In conclusion, we call upon the Commission and the European Committee on Traffic safety education to explicitly recognize the value of being physically fit to drive, and the easy, quick gains that can be achieved by more systematic checking of drivers’ eyesight by an eye care professional during the time that a driver holds his/her licence. A mandatory pass/fail sight examination for all drivers in the appropriate professional environment is a simple measure capable of substantially reducing sight-related accidents and the associated human and financial costs of damage, injuries, and fatalities. Visual health should be incorporated into any plan aimed at reducing the tragic number of traffic accident injuries and deaths in the European Union.

#### **About the associations:**

- the European Council of Optometry and Optics (ECCO)  
[www.ecco.info](http://www.ecco.info)
- the European Federation of the Contact Lens Industry (EFCLIN)  
[www.efclin.com](http://www.efclin.com)
- the European Federation of National Associations and International Manufacturers of Contact Lens Products (EUROMCONTACT)  
[www.euromcontact.org](http://www.euromcontact.org) and
- the European representative of the International Association of Contact Lens Educators (IACLE).  
[www.iacle.org](http://www.iacle.org)
- EUROM I: represents the national associations of Spectacle and Frame Manufacturers  
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