Experts from vehicle manufacturers, system manufacturers, light source manufacturers, testing laboratories, regulatory groups and academia, working to assure traffic safety through the efficient adaptation to technical progress of the regulations relating to automotive lighting systems and their installation.
In the field of automotive lighting, technology continues to develop rapidly with regard to light sources, optical systems and electronic control and this means that the regulations must be maintained in line with this progress while ensuring that safety considerations are not compromised.

The automotive lighting world is truly global and this is clearly evident from the current developments in the UN World Forum (WP29) and also from the widening membership of GTB. It is our objective to develop GTB to ensure that it remains able to represent the interests of system suppliers, light source manufacturers, vehicle manufacturers, testing laboratories and research organisations of all national delegations wishing to be involved.

In parallel with global regulatory development, demanding increasing involvement of the GTB experts, there are many economic challenges that stretch the ability of GTB to work on the proposals for new regulations, standards and their amendments. GTB is totally funded by its membership and of course this is dependent upon the prosperity of the industry that has generously provided support throughout our 60 year history.

As GTB celebrates its 60th anniversary we have great pleasure in presenting this updated overview of the GTB objectives, values, operating structure and achievements. We also attempt to provide our vision for the future development of this completely unique international lighting and light signalling expert group.

During the last four years of our current mandate we have guided GTB through the process of renewal as we transitioned from being a working group based upon ISO, CIE and IEC to an independent association legally seated in Italy. We now look forward to further developing the success and international respect for GTB and to widening its membership.

The GTB Administrative Committee – June 2012
Sixty years active contribution to the UN regulatory process and to global harmonisation of lighting and light signalling.

1st meeting 05-10 May 1952 - Brussels, Belgium

113th meeting 21-25 May 2012 - Copenhagen, Denmark
What is GTB?

GTB is:

- a **unique global group of vehicle lighting experts** supporting the international regulatory process through the combination of their experience and skills as vehicle manufacturers, lighting systems manufacturers, light source manufacturers, test laboratories, regulators and academia. This provides a **unique opportunity for members to be involved in the UN regulatory process**.

- a truly global group, sharing local knowledge and experience and providing an opportunity for all members to keep up-to-date with regulatory progress / research / type approval issues / interpretational issues etc. etc.

- a **non profit organisation** that is funded and managed by its members. The operating costs are shared and this provides a **unique service at low cost for the benefit of all members**.

GTB, through cooperation with other standardisation bodies, provides up-to-date information concerning development of regulations and standards in different regions of the world such as Europe, USA, Canada, Japan, China, India etc. Also, being a technical group without a prime lobbying role, GTB is able to enjoy mutually beneficial cooperation with the major automotive trade associations, whose members frequently contribute in their own right as lighting experts of the various GTB working groups.
The GTB headquarters are located in Turin, Italy, providing:

- the base for our Executive Secretary and Treasurer
- the GTB website giving members access to all documents
- the complete archive of GTB documents from 1952 onwards
More than 150 Experts from:

- Vehicle Manufacturers
- Lighting System Manufacturers
- Light Source Manufacturers
- Test Laboratories
- Regulatory Agencies
- Academia
- GRE Contracting parties

17 Member Associations:

- Austria
- Belgium
- Czech Republic
- Denmark
- France
- Germany
- Hungary
- IMMA
- Italy
- Japan
- Netherlands
- Poland
- Slovenia
- Spain
- Sweden
- UK
- USA
We Cooperate with

- IEC (International Electrotechnical Commission)
- CIE (Commission Internationale de l’Éclairage)
- SAE International
- UNECE (United Nations Economic Commission for Europe)
- ISO (International Organization for Standardization)
## Our Working Rhythm

- Meetings are hosted in turn by the member delegations to ensure all experts have the opportunity to participate.
- Normally two mid-term sessions for the Working Groups each year.
- More than 5000 documents produced.
- More than 500 formal proposals submitted to GRE sessions in the last 10 years (around 50% of the total GRE formal documents).

### Year Meeting Hosting Country Year Meeting Hosting Country

<table>
<thead>
<tr>
<th>Year</th>
<th>Meeting</th>
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</table>

Plenary meetings hosted by the member delegations over the past 20 years.
GTB is based on teamwork, communication, excellent personal and professional relationships and an extensive social network.

Our working language is English but, understanding that the majority of members will not be working in their native language, we endeavour to ensure that everyone is able to fully follow and to contribute in the proceedings.

Networking at the official evening event
Expert Support for the work of GRE and WP29

- Currently 41 Lighting and Light Signalling Regulations
- Secretariat for GRE informal groups
- Participation in WP29 informal groups

Active leadership of Global Harmonisation activities

- Harmonisation WG established in 1989
- Harmonisation of installation requirements (FMVSS108 and UNECE R48)
- Proposal for Harmonised Passing Beam
Our Origins

September 1951: Launch of GTB at Lucerne

Joint Working Party

- International Organization for Standardization (ISO)
- International Commission on Illumination (CIE)
- International Electrotechnical Commission (IEC)

Prime Objectives:

- exchange of views;
- development of standardised test procedures;
- definition of uniform performance evaluation criteria and regulatory requirements;
- all aspects of lighting and light-signalling of road vehicles.
The first formal session was held from 5 to 10 May, 1952 in Brussels and was attended by delegates from 9 European countries (Belgium, France, Germany, UK, Italy, Norway, Netherlands, Portugal, Switzerland).

Agenda

- Comparative tests of passing beam headlamps
- Rear-registration plate light
- Daytime visibility of a signalling light
- Night time visibility of a signalling light
- Tests conditions in diffused attention
- Colorimetric characteristics
- Centre of an illuminating area
Cooperation with UNECE WP29

1953  The UN/ECE Working Party on the Construction of Vehicles (WP.29) began its activities

- GTB was among the international organizations who participated in this work from the start.

1958  Agreement regarding uniform provisions for wheeled vehicles and their equipment and the reciprocal recognition of approvals established the legal basis for the UN Regulations.

- GTB prepared the first set of 8 regulations covering lighting devices
- GTB has been responsible for preparing the technical provisions for practically all subsequent Regulations in the area of lighting and light-signalling.
Cooperation with UNECE WP29 (GRE)

1st session of the Group of Rapporteurs on Lighting and Light Signalling (GRE)

11 July 1977

GTB submitted the first proposal
Cooperation with GRE

GTB provides expert support to GRE and acts as a substitute for informal groups.
Our Evolution

The transformation from a national /regional to a global economy, in particular in the field of motor vehicle production and marketing, had far-reaching consequences for international standardisation and rulemaking. WP.29 is now the World Forum for Harmonization of Vehicle Regulations, its sessions are attended by government delegations from Europe, North America, Australasia, Asia and South Africa.

The 1958 Agreement has 48 Contracting Parties, and 127 UN Regulations have entered into force, among which 41 are in the area of lighting, covering all aspects of individual devices, their installation on the vehicle and their light sources. GTB has adapted its structures and operation to this development and is now an independent non-government organization. GTB membership includes 17 delegations from countries, including Europe, USA and Japan. Representation in national delegations comes from industry, approval testing laboratories, regulatory agencies and academia.

Our principal activity today is the preparation of proposals for new and amended UN Regulations, taking into account technical development, actual testing experience and the safety and economic implications with a view to their practical application.
Our Leaders over the Years

Pierre Devaux  
France  
1951-1983  
32 years

Jean-Pierre Thiry  
France  
1983-1993  
10 years

Jack Hoppenbrouwers  
Belgium  
1993-1997  
4 years

Dieter Matthes  
Germany  
1997-2008  
11 years

Geoffrey Draper  
UK  
2008 –
Our Achievements

- Introduction of halogen and high efficiency incandescent light sources
- Gas-discharge light sources and headlamps for these light sources
- Worldwide harmonized driving beam and passing beam pattern
- Light-emitting diodes (LED) as light sources for light-signalling devices
- Distributed lighting systems
- Bend lighting
- Cornering lamps
Our Achievements

- Daytime running lamps
- New front fog lamps
- Adaptive frontlighting system (AFS)
- Adaptive signal lighting
- Automatic activation of lighting devices
- LED modules in front lighting applications
- Driver assistance systems such as adaptive driving beam
- Headlamp performance assessment procedures
- New regulation for standardised replaceable LED light sources

Acting on a request by GRE, GTB has also prepared guidelines for the submission and evaluation of petitions concerning international automotive lighting and light signalling regulations, which can be used as tool by regulatory agencies when evaluating new ideas for road vehicle lighting.
Technological Progress – Forward Lighting

Value
- Increased Safety and Convenience
- Improved Lighting Performance
- Added Functionality
- Brand Differentiation

Driver Assistance Systems
- Adaptive Driving Beam
- Automatic Levelling

LED Light Source Modules
- Standard

Value
- Increased Safety and Convenience
- Improved Lighting Performance
- Added Functionality
- Brand Differentiation

Improved Styling, Performance, Functionality
- Reduced Package
- Reduced Weight
- Headlamp Cleaning

Full Adaptive Lighting
- Bi-Functional HID with LED indicator lights
- Path Prediction

Full Adaptive Lighting
- LED Forward Lighting
- Car to Car Communication

Camera
- Adaptive LED Lighting

Added Functionality, Full Lighting Systems
- Improved Performance/Safety
- Automatic Levelling

Automatic Levelling
- Camera

Improved Styling, Performance, Functionality
- Reduced Package
- Reduced Weight
- Headlamp Cleaning

• Halogen AFS
• Dual Projector

04  05  06  07  08  2012+

The International Automotive Lighting and Light Signalling Expert Group
Groupe de Travail “Bruxelles 1952”
**Technological Progress – Light Signalling**

**Value**
- Increased Safety and Convenience
- Improved Lighting Performance
- Added Functionality
- Styling Enhancement
- Brand Differentiation

**Improved Styling, Performance, Functionality**
- Reduced Weight
- Reduced Package
- Light guide design
- Multi color lens
- Faceted reflectors
- Full LED rear lighting

**Improved Performance/Safety**
- Emergency Stop Signal
- Variable intensity control

**Improved Appearance**
- Apparent surface
- Planar light guides
- Y-lamps

**Improved Regulations**
- DRLs mandatory

**Year of Availability**
- 96
- 98
- 02
- 06
- 10
- 2015+

**Added functionality, full light signalling systems**
- Cameras
- Sensors
- Adaptive lighting
- Light weight

**Reduced Weight**
- Light guide design
- Full LED rear lighting
- Multi color lens
- Faceted reflectors

**Reduced Package**
- Emergency Stop Signal
- Variable intensity control

**Improved Appearance**
- Apparent surface
- Planar light guides
- Y-lamps

**Improved Regulations**
- DRLs mandatory

**Technological Progress – Light Signalling**
<table>
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<th>Title</th>
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<tr>
<td>4</td>
<td>Uniform provisions concerning the approval of devices for the illumination of rear registration plates of power-driven vehicles and their trailers</td>
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<td>6</td>
<td>Uniform provisions concerning the approval of direction indicators for power-driven vehicles and their trailers</td>
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<td>7</td>
<td>Uniform provisions concerning the approval of front and rear position (side) lamps, stop-lamps and end-outline marker lamps for power-driven vehicles and their trailers</td>
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<td>Uniform provisions concerning the approval of reversing lights for power-driven vehicles and their trailers</td>
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<td>Uniform provisions concerning the approval of rear fog lamps for power-driven vehicles and their trailers</td>
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<td>Uniform provisions concerning the approval of front position lamps, rear position lamps, stop lamps, direction indicators and rear-registration-plate illuminating devices for vehicles of category L</td>
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<td>Uniform provisions concerning the approval of special warning lamps for power-driven vehicles and their trailers</td>
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<td>Uniform provisions concerning the approval of parking lamps for power-driven vehicles</td>
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<td>Uniform provisions concerning the approval of daytime running lamps for power-driven vehicles</td>
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<td>91</td>
<td>Uniform provisions concerning the approval of side-marker lamps for motor vehicles and their trailers</td>
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<td>Uniform provisions concerning the approval of power-driven vehicle's &quot;sealed beam&quot; headlamps (SB) emitting a European asymmetrical passing beam or a driving beam or both</td>
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<td>Uniform provisions concerning the approval of power-driven vehicle front fog lamps</td>
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<td>Uniform provisions concerning the approval of power-driven vehicle's sealed-beam headlamps (SB) emitting an European asymmetrical passing beam or a driving beam or both</td>
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<td>Uniform provisions concerning the approval of headlamps for mopeds and vehicles treated as such</td>
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<td>57</td>
<td>Uniform provisions concerning the approval of headlamps for motorcycles and vehicles treated as such</td>
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<td>Uniform provisions concerning the approval of motor cycle headlamps emitting an asymmetrical passing beam and a driving beam and equipped with halogen lamps (HS1 lamps)</td>
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<td>Uniform provisions concerning the approval of headlamps for mopeds emitting a driving beam and a passing beam</td>
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<td>Uniform provisions concerning the approval of moped headlamps equipped with filament halogen lamps (HS2)</td>
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<td>Uniform provisions concerning the approval of cornering lamps for power-driven vehicles</td>
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<td>Uniform provisions concerning the approval of retro-reflecting devices for power-driven vehicles and their trailers</td>
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<td>Uniform provisions concerning the approval of advance-warning triangles</td>
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<td>Uniform provisions concerning the approval of rear marking plates for slow-moving vehicles (by construction) and their trailers</td>
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### UN Regulations supported by GTB

#### Installation

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<td>Uniform provisions concerning the approval of vehicles with regard to the installation of lighting and light-signalling devices</td>
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<td>Uniform provisions concerning the approval of light emitting diode (led) light sources for use in approved lamp units on power-driven vehicles and their trailers</td>
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GTB Restructure

Joint ISO / CIE / IEC Working Party
1951

Restructuring Plan
Statute and By Laws
Signing of the Constitutive Act

Legally Established Association
2011
New Legal Status

Signing of Constitutive Act
Turin, Italy – 26 January 2011
Restructuring Objectives

- To operate efficiently in a highly competitive global community
- To reinforce the democratic process
- To achieve efficient utilisation of expert resources
- To collaborate closely through teamwork
- To reduce the time to introduce new technologies into the Regulations
- To ensure accuracy of proposals
- To improve our support of GRE activities
- To be able to cooperate and provide an expert contribution to the development of regulatory systems of countries that are not signatories to the UN agreements
General Assembly
Policy and Finance
Representatives of Member Associations

Administrative Committee
Day - Day Management
President
Vice President
Treasurer

Technical Steering Committee
Provides Guidance to the Committee of Experts
Represents the Committee of Experts
(Administrative Committee + WG Chairs and Secretaries)

Committee of Experts
Proposes new work items
Agrees the work programme and priorities
Reviews the progress of the working groups and task forces
Formally approves proposals to be submitted to external Bodies

Working Groups and Taskforces
Develop detailed proposals

Regulatory Bodies
UNECE
NHTSA
etc.
Operating Structure

**Technical matters**
- COMMITTEE OF EXPERTS
  - TECHNICAL STEERING COMMITTEE
    - WORKING GROUPS
      - Front Lighting
      - Light Signalling
      - Light Sources
      - Safety and Visual Performance (Advisory WG)
      - Installation (Advisory WG)
      - Photometry (Advisory WG)
    - Task Forces

**Administrative matters**
- ADMINISTRATIVE COMMITTEE
  - TASK FORCES
    - Coordination of Automotive Visibility and Glare Studies
    - Conformity of Production

- GTB Mirror Group working with the SAE Lighting Committee
- Regulatory Cooperation Task Force

*GTB* The International Automotive Lighting and Light Signalling Expert Group
Groupe de Travail "Bruxelles 1952"
The GTB Officers

President: Geoffrey Draper

Geoff retired in March 2009 after a career spanning 47 years in vehicle lighting. After qualifying as a Mechanical Engineer he worked in optical development and later as Chief Lighting Engineer for Lucas. Subsequently he managed Forward Lighting Development at Magneti Marelli in Italy and later returned to the UK as Managing Director of Gilardini UK Ltd. In 1998 he accepted an invitation to join Koito Europe as Technical Director based in Belgium and in the last five years before his retirement he directed the Koito regulatory affairs and concentrated on his work in GTB, CIE and SAE. Now, in addition to his GTB duties, Geoff is a member of the ISAL Steering Board and a regular contributor to SAE Lighting Committee meetings and the Driving Vision News Workshops.

Vice President: Dr. Bart Terburg

Bart graduated Cum Laude from the Delft University of Technology, The Netherlands with a Master’s degree in Applied Physics and holds a Ph.D. in Physics from the University of Illinois at Urbana-Champaign (UIUC). He started work with GE Lighting, where he held roles in product design, new product application, quality, safety, and regulatory programs within the automotive product line and in 2008 joined OSRAM SYLVANIA where he is currently Automotive Regulations Manager. In addition to his GTB duties, Bart is chairman of the SAE Lighting Committee and the SAE International Lighting Standards Advisory Group, has sponsored six SAE standards, authored several scientific papers and holds 4 U.S. Patents.

Executive Secretary and Treasurer: Davide Puglisi

Davide completed his studies in Electronics and Telecommunications Engineering in 2000 in Turin, Italy. After having spent two years in London to further study English and web-designing he moved back to Italy where in 2002 he started to work for CUNA, the Italian standardization body for road vehicles. Ever since he has been involved, as Italian representative, in ISO and CEN standardization activities in the fields of automotive electronics, lighting and telematics, active and passive safety, ergonomics and visibility. Since 2004 he is in charge of managing the GTB Secretariat as Executive Secretary and in 2011, with the legal establishment of GTB, he was appointed as GTB Treasurer.
Management Priorities

• Ensure that GTB remains “in-tune” with new lighting and vehicle technologies. This will be particularly important as the UN lighting and light signalling regulatory system will evolve and GTB will be expected to be a major contributor in this process.

• Respond to economic pressures, and their impact on the need to continue to fully involve all of our experts, to ensure the quality of our input to the regulatory processes.

• Deliver assertive management in conjunction with Head-Delegates and Working Group Chairpersons.

• Re-organise as necessary in response to anticipated future pressures.

• Maintain adequate funding with the emphasis on cost effectiveness.

• Use latest communication technologies to increase our efficiency.

• Encourage and maintain the excellent collaboration and social networking of our experts.
Chairperson: Dr. phil. nat. Rainer Neumann

Rainer studied physics at the university of Frankfurt/Main, where he gained his diploma and Ph.D. in Optics. In 1984 he joined Bosch in Stuttgart, where he spent 13 years in Research and development of Automotive Lighting. In 1997 he became the global director of lighting development at Magneti Marelli in Italy and in 2000 he joined Visteon as the Head of the European Lighting group. He is now Director of Lighting Global Business Development. Rainer has published numerous articles, holds more than 100 patents and is reviewer of the SAE Technical Congress, scientific member of the Vision Congress, and steering committee member of the ISAL Symposium.

Secretary: Jean-Marc Prigent

After gaining his mechanical engineering qualifications Jean-Marc worked for Axo Scintex as a signalling lamp designer. In 1999 he joined Koito Europe to work as a resident engineer at the Renault technical centre and gained valuable experience working closely with the Koito Technical headquarters in Japan and its manufacturing sites in the UK and in the Czech Republic. After working in Japan for extended periods to support specific projects, Jean-Marc became Manager of the Koito French Office in 2002 and in 2008 was promoted to the Koito Europe corporate headquarters to take responsibility for Regulatory Affairs and became a member of the UK Delegation to GTB.

Scope: All technical, legislative, performance and safety aspects concerning forward lighting devices on vehicle categories M, N, L, O and T.
Working Group – Light Signalling

Chairperson: Olaf Schmidt

After completing his military service in 1977, Olaf studied Chemistry at Ruhr University and graduated with a Masters Degree in 1981. He was first employed as a government scientist until 1985 when he joined Hella R&D and has been responsible for directing the Legislative and Regulatory affairs relating to lighting and light signalling issues for Hella International. In addition to chairing the GTB Signal Lighting Working Group, Olaf is a regular contributor at the UN meetings of WP29 and GRE, as an expert of the SAE Lighting Committee and is currently Head Delegate for the GTB German delegation and chairman of the CLEPA Technical Regulations WG – Lighting and Signalling.

Secretary: Lukas Schwenkschuster

After graduation as electrical engineer in 1996 at Darmstadt University, Lukas Schwenkschuster worked for 4 years as research associate with Prof. Schmidt-Clausen. Than he joined R&D of Hella for rear lighting functions, but soon lead a small group dedicated to enable the first adoption of LEDs in signal lighting functions in headlamps. As a consequence of the obtained findings, he successfully contributed to the development of forward lighting LEDs and consequently the very first prototypes of full-LED headlamps. In 2005 he joined Schefenacker to support their activities in LED forward lighting. Currently he is responsible for Regulations & Standards within Odelo and the Bayraktarlar lighting group.

Scope: All technical, legislative, performance and safety aspects concerning light-signalling devices including lamps, retro-reflectors and other retro-reflecting devices on vehicle categories M, N, L, O and T.
Working Group – Light Sources

Chairperson: Ad de Visser

Ad studied Electrical Engineering at the Technical University Eindhoven, and was awarded Master Cum Laude in Lighting having had the honour to work under the guidance of Prof de Boer. He has worked in Philips since 1978, initially on defence systems followed by interior, exterior and automotive lighting. Ad has experience in various functions in lighting engineering and standards organisations including NSVV, CIE, CEN, ILE, GTB, ELMAPS and SAE. Currently, he is Director, Standardisation Automotive Lighting and is GTB NL Head Delegate, representative of IEC TC34 to GRE, ELMAPS TC3 chair, board member and Director of CIE Division 4 (Lighting and Signalling for Transport) and board member of NSVV.

Secretary: Dr. Bart Terburg

Bart graduated Cum Laude from the Delft University of Technology, The Netherlands with a Master’s degree in Applied Physics and holds a Ph.D. in Physics from the University of Illinois at Urbana-Champaign (UIUC). He started work with GE Lighting, where he held roles in product design, new product application, quality, safety, and regulatory programs within the automotive product line and in 2008 joined OSRAM SYLVANIA where he is currently Automotive Regulations Manager. In addition to his GTB duties, Bart is chairman of the SAE Lighting Committee and the SAE International Lighting Standards Advisory Group, has sponsored six SAE standards, authored several scientific papers and holds 4 U.S. Patents.

Scope: All aspects concerning light sources within the objectives of GTB
Advisory Working Group – Installation

Chairperson: John Veasey

John started his working life as a Technical Apprentice in 1977 with the British Leyland Corporation. Having achieved a Higher National Diploma he moved to the Electrical Engineering Department of Jaguar Cars. In 1985 he decided to go to the USA where he spent 3 years working for GM on their Corvette model. He then returned to the UK where he joined Land Rover, where he is still employed (now known as Jaguar Land Rover), John delivered several whole vehicle lighting systems before specialising in regulatory and certification activity. John also chairs the UK National Vehicle Lighting committee at the SMMT.

Secretary: Valter Genone

Valter completed his studies in Aeronautic Construction in 1973 and after various working experiences he joined the Regulation Department of FIAT Auto in 1978 where he still works. From the beginning his main tasks have been lighting, visibility, mirrors, controls and telltales and, more in general, on electrical systems of the vehicles. As technical expert on behalf of the Italian Ministry of Transport Valter followed the development of the EEC Directive 76/756 on Lighting installation and, since 1984, has regularly attended GRE sessions in Geneva. Additionally he has been an active participant in GTB for over 20 years as Italian expert and, in 2010, he became secretary of the newly established WG Installation.

Scope: Legislative requirements, which have a direct impact on the installation of lighting and light signalling devices; affecting vehicles of categories M, N, O (Reg 48), L (Reg 53 & 74) and T (Reg 86),
Advisory Working Group – Photometry

Chairperson: Dr. Karl Manz

After studying physics from 1971 to 1977, Karl graduated with a diploma thesis on superconductivity and low temperature physics and then started work on the research on low pressure gas discharge lamps and later on affinity continua of negative ions in high pressure gas discharge lamps. In 1983 he became vice-head of the LTIK test house in Karlsruhe and meanwhile was awarded his PhD (Dr. Ing.) in Engineering Science in 1984. In 1993 Karl became Head of the LTIK Test House that he continues to manage. In addition to his LTIK responsibilities Karl continues to be an active contributor to the work of GTB and regularly attends GRE as the German government lighting and signalling expert.

Secretary: Wilfried Van Laarhoven

Wilfried studied Physics with a specialisation in Optics and started working at DEKRA (formerly KEMA) in 1989 and later became group leader in the Photometric Laboratory. His present roles include Global Sales Manager – Photometry, New Business Development Manager Lighting and Photometry and Project Manager. Wilfried is responsible for the testing of automotive lighting, light signalling and light sources according to the UN Regulations and to FMVSS108/CMVSS108/SAE

Scope: all issues regarding measuring methods and procedures used in testing for type approval of lighting and light-signalling devices, of light sources and of their installation on road vehicles and in compliance with the obligations regarding their accreditation as set out in Standard EN-ISO 17025.
Advisory Working Group – SVP*

Chairperson: Dr. Karl Manz

After studying physics from 1971 to 1977, Karl graduated with a diploma thesis on super conductivity and low temperature physics and then stated work on the research on low pressure gas discharge lamps and later on affinity continua of negative ions in high pressure gas discharge lamps. In 1983 he became vice-head of the LTIK test house in Karlsruhe and meanwhile was awarded his PhD (Dr. Ing.) in Engineering Science in 1984. In 1993 Karl became Head of the LTIK Test House that he continues to manage. In addition to his LTIK responsibilities Karl continues to be an active contributor to the work of GTB and regularly attends GRE as the German government lighting and signalling expert.

Secretary: Gert Langhammer

Having studied Lighting Technology and Light Sources at the Moscow Energetic Institute, Russia, Gert graduated with an Engineering Diploma in 1985 and started working in Lighting R&D at the FER (Kombinat Fahrzeugelektrik Ruhla) Development Centre. In 1990 he joined the sales department of Robert Bosch in Brotterode, Germany and subsequently transferred to R&D Lighting design. In 1999, following the formation of Automotive Lighting GmbH, Gert became responsible for project management and in 2010 he assumed his present position as Manager of International Legislative Affairs.

Scope: To provide scientific background for GTB decisions, and to create a pool of knowledge for GTB in cooperation with other experts and scientists outside of GTB

*SVP= Safety and Visual performance
Chairperson: Michael Pernkopf

Michael studied Technical Physics in Vienna (1996-2002) and started working as optical engineer at ZKW Group in Wieselburg, Austria. Since 2004 he has been Homologation Manager and has studied Innovation management outside regular work hours at the University of Applied Sciences in Wiener Neustadt. In 2009 Michael became the official UN-GRE delegate representing the Austrian Ministry of Transport, Innovation and Technology. He has filed several patents and his motto is: “You cannot know everything, but you can ask everything.”

Secretary: Wilfried Van Laarhoven

Wilfried studied Physics with a specialisation in Optics and started working at DEKRA (formerly KEMA) in 1989 after as group leader in the Photometric Laboratory. His present roles include Global Sales Manager - Photometry, New Business Development Manager Lighting and Photometry and Project Manager. Wilfried is responsible for the testing of automotive lighting, light signalling and light sources according to the UN Regulations and to FMVSS108/CMVSS108/SAE.

Scope: To study the COP requirements of Regulation 123 (AFS) and develop revised COP requirements for Regulation 123. Based upon the experience gained from the review of Regulation 123 the Task Force may be requested to expand the study to all lighting regulations.
Task Force – LED Light Sources

Chairperson:  Dr Thomas Reiners

Thomas studied Physics and Mathematics in Bielefeld and Freiburg, Germany, where he gained his Diploma degree. He holds a PhD in Physics from Albert-Ludwig-University in Freiburg. After 3 years working in surface science he joined the automotive R&D department at OSRAM in 1996 focusing on development of automotive discharge lamps. Since then he has held various positions in product development and application engineering for Automotive, Display-Optic and LED systems. Thomas is currently global director for Application Engineering within OSRAM’s business unit Specialty Lighting (SP) in Herbrechtingen, Germany.

Secretary:  Dr. Josef Schug

Josef holds a Ph.D. in Physics from the “Technische Hochschule in Aachen.” He joined Philips Research Labs in 1990 to work on colour displays. In 1994, he moved to Philips Automotive Lighting as Product Manager for automotive light sources and later became head of the Application Centre - Automotive Lighting. Since 2003 Josef has developed LED solutions for automotive lighting and recently has focussed on technology developments enabling the reliable operation of high power LEDs at high temperatures. He is active in various international standardization committees and was chairman of the GTB working group LED front lighting from 2007-2011.

Scope: Development of proposals for the regulation of standardised replaceable LED light sources for signalling and forward lighting applications.
Task Force – CAVGS*

Chairperson: Ad de Visser

Ad studied Electrical Engineering at the Technical University Eindhoven, and was awarded Master Cum Laude in Lighting having had the honour to work under the guidance of Prof de Boer. He has worked in Philips since 1978, initially on defence systems followed by interior, exterior and automotive lighting. Ad has experience in various functions in lighting engineering and standards organisations including NSVV, CIE, CEN, ILE, GTB, ELMAPS and SAE. Currently, he is Director, Standardisation Automotive Lighting and is GTB NL Head Delegate, representative of IEC TC34 to GRE, ELMAPS TC3 chair, board member and Director of CIE Division 4 (Lighting and Signalling for Transport) and board member of NSVV.

Secretary: Dr. Bart Terburg

Bart graduated Cum Laude from the Delft University of Technology, the Netherlands with a Master’s degree in Applied Physics and holds a Ph.D. in Physics from the University of Illinois at Urbana-Champaign (UIUC). He started work with GE Lighting, where he held roles in product design, new product application, quality, safety, and regulatory programs within the automotive product line and in 2008 joined OSRAM SYLVANIA where he is currently Automotive Regulations Manager. In addition to his GTB duties, Bart is chairman of the SAE Lighting Committee and the SAE International Lighting Standards Advisory Group, has sponsored six SAE standards, authored several scientific papers and holds 4 U.S. Patents.

Scope:
Project management and quality control of activities by GTB working groups in relation to Automotive Visibility and Glare studies. Informal communication with GRE, OICA, and CLEPA through liaisons, optional collaboration with SAE and CIE through liaisons; communication via GTB CE to GRE and to a public accessible section on the GTB web site.

* CAVGS- Coordination of Automotive Visibility and Glare Studies
Task Force – CAVGS

CAVGS - Coordination of Automotive Visibility and Glare Studies

- Chair: A de Visser
- Co-Chair/Secretary: B Terburg

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- OICA Experts
- CLEPA Experts
- WG-SL Experts
- WG-SVP Experts
- GRE Experts
- CIE Experts
- SAE Experts
- WG-FL Experts
- WG-I Experts

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GTB
The International Automotive Lighting and Light Signalling Expert Group
Groupe de Travail “Bruxelles 1952”
Submission and Approval Process for Amendments to UNECE Regulations

- GTB Working Group
- GTB Committee of Experts
- GRE
- UN. WP.29 (AC1)
- Entry into Force

17 Months Min
26 Months Min
New Relationship with GRE

- Major focus of GTB work on the UN regulatory system
- Shared objectives – safety and economic advantage
- Common understanding of potential conflicts – industry / government
- GTB operates as a substitute for GRE informal groups
  - Transparency
  - Participation of GRE experts in GTB Working Groups
- Invitation from GRE for GTB working groups to present activities at each GRE session.
  - Technology and regulatory road-maps
  - Status reports

Working Group Chairmen presenting their activities to GRE in Geneva during a regular reporting session chaired by the GTB Vice President
In March 2011 GRE invited GTB to lead a comprehensive study of the whole issue of glare and visibility during night-time driving relating initially to forward lighting and later to be extended to light signalling.

In the case that the results of the forward lighting study reveal alternatives to the mandatory requirements for automatic leveling and cleaning, the provisions of Regulation No. 48 will be revised.

The study is managed by a dedicated taskforce (CAVGS) based upon the GTB structure and the participation is open to any GRE expert wishing to contribute.
The Value of GTB Membership

- A unique opportunity to influence the international lighting and light signalling community and its approach to regulation.

- An effective means of contributing to the drafting and upkeep of UN and other global regulations.

- Provides up to date information on regulatory and technology trends.

- Ensures up to date regulation to reduce the time to market of new technologies.

- All parties working to a common goal to facilitate traffic safety and economic advantage.
In response to the continuing globalisation of industry and regulation, GTB will cooperate with administrations of countries that may not apply the UN regulatory process and continue to operate their own safety standards. This cooperation is intended ensure that the latest technologies can be installed on vehicles destined for the world markets.

We will also actively cooperate with GRE to simplify the UN lighting and light signalling regulations with the objective of placing more emphasis on performance requirements and less on construction. This is expected to provide the opportunity to reduce the number of regulations and so to reduce the number of amendments and corrigenda.

The emphasis of globalisation of GTB is expected to be of particular interest to new members from the “B.R.I.C.S” countries. This will clearly present new challenges and high expectations that GTB must be capable of delivering through the contribution of its experts and its cooperation with Governments, SAE, CIE, IEC, ISO etc.
If you already belong to one of the GTB member delegations, ensure that you derive full benefits from being part of the global lighting expert group.

If your national group is not a member of GTB, consider forming a national association and joining us.

For further information please contact:

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www.gtb-lighting.org