

Annual Report: Commission for Extrication and New Technology

Report of Yvonne Näsman, Vice President of CTIF



Overview Commission

Member countries:

- *Austria:* Roman Sykora, Wolfgang Niederauer
- *Belgium:* Tom Van Esbroeck, Willy Tomboy
- *Czech Republic:* Jakub Klucho
- *Denmark:* Kenny Bülow
- *Finland:* Mikko Saastamoinen
- *France:* Serge Delaunay, Michel Gentilleau
- *Germany:* Ruediger Knoll, Ivana Kordoba-Kruijff, Jörg Heck, Tanja Hellmann
- *Italy:* Marco Aimo-Boot (Iveco)
- *Luxembourg:* François Christnach, Joël Bieber
- *Japan:* Hirochi Fukushi
- *Norway:* Svein Thelin Knutsen, Ingar Danielssen
- *Portugal:* Antonio José M.N. Calinas
- *Slovenia:* Milan Dubravac
- *Spain:* José Miguel Basset, Carles Comeche
- *Sweden:* Tore Eriksson, Yvonne Nasman
- *Netherland:* Mark Bokdam, Lean Remmerde.

- *Chairman:* Mikko Saastamoinen (1st term)
- *Vice-chairman:* Michel Gentilleau and Mark Bokdam
- *Secretary:* we have different secretary at different meeting

Commissions meetings during the year

We have had two virtual meetings and one face-to-face meeting during the year. We had to one face-to-face meeting in Finland/Lapland in January 2023.

Virtual meetings: January 25th Mars 29th and May 24th

Ongoing activities

Project robot-assisted incident response

Fire services increasingly consider using mobile robot systems, with the aim to increase operational safety and operational capability at incident sites.

The Commission has set up the Robot-Assisted Incident Response (RAIR) project to monitor the ongoing research and technology development and to facilitate the exchange of information in this area. At the Commission meeting on May 24 2022 I. Kruijff made a presentation about the most recent deployment of the robotic task force of the German Rescue Robotics Center (DRZ; URL: www.rettungsrobotik.de) after a residential complex fire in Essen in February 2022.

The goal of the deployment was the creation of 3D models for fire cause determination. The deployment used one ground robot Telemax of Telerob and one DJI FPV drone. The ground robot carried out three inspection sorties (ground floor left, ground floor right, 1st floor), duration 45-75 min each. Lessons learnt through the deployment: The ground robot was suitable for the given operating conditions, although it was at the limit of its mobility. Assistance functions were essential to relieve the operator in the difficult environment. More hardening for these operating conditions is essential. Great potential for cooperation of ground robot and drone was identified, e.g., drone to provide an external view for the ground robot operator.

The RAIR project of the Commission will continue to overview the relevant national and international research and innovation activities, the available robot technology and experiences with its use in practice.



Roadmap collaboration IEDO and CTIF



The purpose of being a part of the project is to support and help CTIF members with issues and answering drone related questions. IEDO has expectations:

- To develop awareness of drone uses through **sharing knowledge & experiences**
 - To develop and increase the knowledge content shared. Share the good practices from the participating countries. Think of Operational Manuals and SORA's (Specific Operational Risk Assessments)
 - To develop and increase the network of sharing: By building a network on what we know and where to find which knowledge.
 - To associate CTIF into the drone best practices report update
 - To create a world database of emergency drone safety
- To harmonise EU emergency drone legislation to be more **efficient**
 - To build standard emergency scenario for EU fire & rescue services
 - To propose it to EASA

Topics:

- Operational Manuals (sharing)
- including SORA's,
- NightOps, State Aircraft vz Regulation
- Development pay-loads

Collaboration between FIA and CTIF

During 2022, Mikko Saastamoinen had a couple negotiations with FIA rescue specialist, Mr. Ian Dunbar. The goal is to achieve collaboration between FIA and CTIF. The message was that all projects are on "hold". In Secto rally Finland, Mikko had negotiations with Finnish chair of ASN and member of FIA, Mr. Jarmo Mahonen. He thinks this is good idea and he was sending a message to Mr. Stuart Robertson Andrew Wheatly. Mikko waited for their message and December 2022 Mikko Approach them. It seems that they are busy and it responding is just forgot. They promised to approach in 2023. We are still waiting that contact. Message was, that waiting several months is "normal".

CTIF DELEGATES ASSEMBLY 2023

Mikko has also discuss of this with Mr. Ari Vatanen and he was very interested of this. Soo it seems, that there is interest, but it will take some time and probably needs some outcomes of our results. (That they can see benefit with that collaboration.

Solar Panels

A small working group will collect information and make it available to the CTIF. Think of lessons learned, points of attention when acting by incidents and information about the safety of the installation. The working group will make an action plan this month.

There is an Attention card available; this was presented during the Lapland meeting in January 2023. The members of CTIF can use the card.

More information: ask Mark Bokdam by m.bokdam@brandweertwente.nl



CTIF working group implementation process ISO 17840

After the publication of the ISO 17840 standard, the Commission mainly has its hands full to put words into action: namely the implementation or conversion of theory into practice. In addition to some supporting information packages, the Committee also offers 'best practices'. By promoting and sharing the examples in other countries everywhere, the ISO standard is gradually receiving more attention and is becoming clear to the people in practice. Chair of the WG is Tore Eriksson.

The situation now: CTIF is interested to continue to market the standard in all the member countries and beyond and to work hard in order to get the standard implemented in Europe but also all over the world. Several countries are ready to actively start working with the implementation of the standard on a national level. ISO owns the copyright to the standard and everything included. In order to simplify the various processes that are needed for this, CTIF aims to facilitate the access to the fuel symbols for the members of CTIF and to create basic instructions for the processes and to collect good examples/best practises and spread the information throughout our organisation. We are also interested to share this information with for example public transport organisations.

CTIF DELEGATES ASSEMBLY 2023

The situation now: CTIF is interested to continue to market the standard in all the member countries and beyond and to work hard in order to get the standard implemented in Europe but also all over the world. Several countries are ready to actively start working with the implementation of the standard on a national level. ISO owns the copyright to the standard and everything included. In order to simplify the various processes that are needed for this, CTIF aims to facilitate the access to the fuel symbols for the members of CTIF and to create basic instructions for the processes and to collect good examples/best practises and spread the information throughout our organisation. We are also interested to share this information with for example public transport organisations.

The next steps:

A. CTIF is interested to get an agreement with ISO for the above mentioned steps in order to be able to print and distribute the Fuel symbols to our members on a not for profit basis.

B. ISO shall continue to be the sole distributor of the standard but CTIF would like to advertise the how to access the standard and to make use of it.

C. CTIF is also interested to obtain an agreement with ISO for the use of a set of graphical symbols from the 17840 standard in order to make easy to understand instructions and to distribute them to our members and other actors in the societies.

CTIF is also likewise interested to discuss an agreement with ISO in order to be able to create similar easy to understand instructions for non-fire and rescue actors if they are interested to implement the 17840 standard and to distribute the instructions free of charge to interested organisations and other actors.

ISO working Group 7 Rescue Sheets - Revision of ISO 17840 – 1

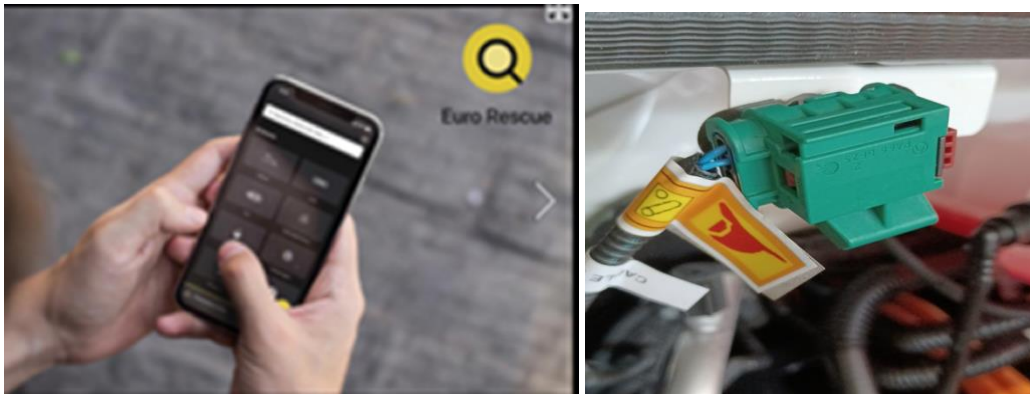
CTIF is partner in the working group that has been installed to review the standard ISO 17840-1: "Road vehicles – Information for first and second responders — Part 1: Rescue sheet for passenger cars and light commercial vehicles" Project leader is Celine Adalian. CTIF and ISO are approaching the fire service colleagues and standardization institution of China to coordinate the standards and the use of rescue sheets. For now Extrication & New Technology do not have a representative in WG7.

EuroNcap tertiary safety group

CTIF is firefighter's representative for EuroNCAP tertiary safety group. Meetings stand every 2 months in Leuven (Belgium). OEM's, car drivers associations, car crashed centre and EuroNCAP are a part of this group. 2023 roadmap (validated last year) brought to fire services, many good results: creation of free of charge Eurorescue app with ISO mandatory rescue sheets, rescuers labels to disable energy, supplementary e-call information's, automatic door opening, submergence criteria.

2025 roadmap is in progress with many great objectives: others supplementary e-call information's, CTIF inspectors to assess the vehicles in a rescuers perspective, thermal runaway rescuer tools, disabling energy protocols homogenization, license plate numbers linked to Eurorescue app 2 CTIF proposals have already been accepted : automatic hazard lights after crash and tailgate manual opening (from inside). Works in progress.

Another big challenge came at the beginning of 2023: integration of the trucks in the Euro NCAP ratings. CTIF is now involved in the 2024 trucks roadmap. Main objectives are to get ISO trucks rescue sheets integrated in Eurorescue app and to make mandatory the use of energy labels and disabling energy protocol labels on trucks.



International exchange of experts: electrical vehicles & Communities of Practice 'Battery Packs' & 'Hydrogen' (Institute for Safety – the Netherlands)

Tom Van Esbroeck introduced the Commission for Extrication & New Technology to this international Exchange of experts. The operation and in particular the results achieved in different fields of work were explained and discussed. It was agreed to open the platforms to the members of the Commission and to share as much knowledge and working documents as possible.

European Hydrogen Safety Panel

The EHSP is composed of a multidisciplinary pool of safety experts grouped in ad-hoc working groups (task forces) according to the tasks to be performed and to expertise. The FCH 2 JU launched the European Hydrogen Safety Panel (EHSP) initiative in 2017. The mission of the EHSP is to assist the FCH 2 JU both at programme and at project level in assuring that hydrogen safety is adequately managed, and to promote and disseminate H2 safety culture within and outside of the FCH 2 JU programme. The EHSP will provide to the FCH JU a unique, practical and direct access to state-of-the-art expert judgment for all issues regarding hydrogen safety. It will improve the transfer of safety knowledge across project boundaries and establish a consistent communication about safety performance. Tom Van Esbroeck represents CTIF and is mainly focusing on dissemination and education for first responders. CTIF is represented in the EU projects as EU HyTunnel & Confined Spaces and EU Hyresponder. Both projects are linked to this platform.

Project -Generic Extinguish method for propagating Li-ion batteries

CTIF is a part of this project represented by Michel G and Tom. The Purpose of this project is to clarify, demonstrate and communicate a method for handle and extinguishing thermal events in Li-ion battery applications. It also includes clarification of personal risks, electrical safety and environmental impact to create knowledge and security among rescue services and electric car customers, markets and media globally. The projects includes clarifications and fact-based information about differences/similarities with conventional vehicle applications such as emissions and fire rescue processes. This is to be able to end erroneous fears and speculations. You will find the report “Demonstration extinguish method for Lithium-ion batteries, Method application at different levels of aggregation – module, sub-battery electric car pack and vehicle level “ see attached link: <https://www.msb.se/sv/sok/?searchQuery=s1%C3%A4ckmetod+litiumjonbatterier>

This was also presented during the Lapland meeting in January 2023.



European Hydrogen Train the Trainer Programme for Responders

HyResponder is a European Hydrogen Train the Trainer programme for responders. The project consortium has 16 partners from 10 countries all coordinated by Ulster University. The CTIF focus centred on evaluation of HyResponder activities to create recommendations leading to establishment of hydrogen safety training across Europe. CTIF recognises it can be difficult for all firefighters to get trained. Time, travel distance, personal cost and practical issues affect how and when firefighters can have hands on practical experiences in purpose-designed facilities.

This is especially true for volunteers and those located in rural or remote locations and cannot easily attend central training schools. We therefore looked into the basics, especially those we feel it's essential to have, like certain key information about hydrogen, the gas itself and the flames produced and risk of explosions. This provides the foundation of safety distances and routes of approach as well as for tactics to minimise any impact from a release or fire and allow rescues of any casualties.

It also means knowing how the gas is used every day, so you know where it might be found, and what you must do to safeguard yourself, colleagues and the public. CTIF shared information from scientists, trainers and other first responders to provide a simple course that uses a progressive series of short packets of information that collectively will build knowledge explore skills and offer experiences.

Recognising some of the incident situations cannot be easily replicated this information is therefore provided not only in written form to use in lectures but as short videos and through virtual reality simulation. This means self-study at home in your own time as well as more formal organised practical training or special hydrogen focused events that bring groups together can be used to learn

This approach has been packaged, as a framework directly focused upon the first responder, the firefighter, who may arrive at an emergency without any prior knowledge they are will be attending an event involving hydrogen. The training framework can be freely downloaded together with the learning materials, all of which have been developed by those experienced in hydrogen and training.

CTIF DELEGATES ASSEMBLY 2023



It may be used by fire and rescue organisations to help create training courses as a whole or adapted in part to assist develop an existing training course. Some of those course may have to meet national approved standards so this framework is set in the European Qualification Framework Level 2

It is important to remember that the framework is based upon the fact that each person using this information already has sufficient training and background to be safe in operational practice. This means each individual must

already be knowledgeable about their local standards of operational practices, experienced in operating in emergency situations with full personal protective equipment and be skilful in tactical firefighting and rescue in situations involving hazardous materials.

Using CTIF's knowledge of firefighters across Europe, with their training needs and educational backgrounds, which vary significantly initial educational material was re-evaluated and developed within four different learning levels that matched defined, corresponding operational roles and competence levels for Firefighter, Crew Commander, Incident Commander, and Specialist Adviser, which equates to the technical knowledge required of HAZMAT officers.

HyResponder has clear educational, operational and virtual reality materials to support training of first responders to reflect the state-of-the-art in hydrogen safety, including liquid hydrogen, and should enable the programme to expand across Europe. A revised European Emergency Response Guide is also now available the resources are available in Czech, Dutch, English, French, German, Italian, Norwegian and Spanish.