

Annual Report: Commission for Extrication and New Technology

Report of Yvonne Näsman, Vice President of CTIF
and Chair Mikko Saastamoinen



Overview Commission

Member countries:

Mikko Saastamoinen	FIN	Chairman
Michel Gentilleau	FRA	Vice-chair
Mark Bokdam	NL	Vice-chair
Yvonne Näsman	SWE	vice-president/member
Joel Bieber	Luxemburg	member
Franz Christnacht	Luxemburg	member
Marco Aimò	ITA	member
Pieter Derveaux	BEL	member
Robby Testard	BEL	member
Jakub Kluchó	CZ	member
Kenny Bülow	DEN	member
Tin Butala	Croatia	member
Mateo Tropa	Croatia	member
Wolfgang Niederauer	Austria	member
Ivana Kruijff-Korbayova	GER	member
Jörg Heck	GER	member
Rüdiger Knoll	GER	member
Dimitri Pelletier	FRA	member
Tore Eriksson	SWE	member
Per-Ola Malmqvist	SWE	member
Svein Knutsen	NOR	member
Charilaos Margiolakis	Greece	member
Simão Luís Pechirra Velez	Portugal	member /replaced Antonio Calinas
José Miguel Basset	Spain	member
Dan Munsey	USA	member
Ales Cedičnik	Slovenija	member
Alexandros Kolios	Greece	member
Aristeidis Kontos	Greece	member

- *Secretary*: we have different secretary at different meeting

Commissions meetings during the year

We have had two virtual meetings and two face-to-face meeting during the year. We had face-to-face meeting one in Austria in December 2023 and one meeting during spring in Croatia April 23th-25th 2024.

Virtual meetings: The chairs and the vice president have had meeting every second week.

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 goal of the Commission's project Robot-Assisted Incident Response (RAIR) is to monitor the ongoing research and technology development and to facilitate the exchange of information in this area.

The Commission decided to systematically gather information and experiences about incidents in which robots were deployed, and share this through the CTIF website. Ivana Kruijff and colleagues from the German Rescue Robotics Center (DRZ) prepared a proposal what information could be collected in a database. The proposal was discussed with Björn Ulfsson and Tore Eriksson, concluding that putting up a database would require technical skills that CTIF currently does not have and it would be difficult for CTIF to engage more technical support at this point, because there would be additional costs.

The DRZ revised the proposal what information to collect about every incident to make it simpler and prepared it as a Microsoft form. The input gathered from firefighters who use robots should serve as basis for writing and publishing articles about the deployments on the CRIF website.

DRZ contacted several partners to fill in the form for a few incidents as a first trial. So far there is information about 2 robot deployments in Germany and 2 in the Netherlands. An article about the deployment in Essen, Germany was published. Further articles are in preparation. Specific tags are used for articles about robot deployments so that they can be searched for. DRZ and the Commission members will engage additional contributors to fill in the form. This solution will work if we are getting a very small number of articles per month. If the amount of input grows unexpectedly we will need to rethink the approach.

Another recent initiative is that DRZ has collected an extensive overview of ground and air systems, with their characteristics according to the German norm on robotic systems for use in hazardous applications, cf. [DIN SPEC 91447-1](#) and [DIN-SPEC 91447-2](#). The goal of the deployment was the creation of 3D models for fire cause determination. The deployment used one ground robot Telerob 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 and Regulation
- Safety issues (sharing information)
- Best practices (sharing information)

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 “.

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. The attention card is shared by the website of ctif.org

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.

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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 standards 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

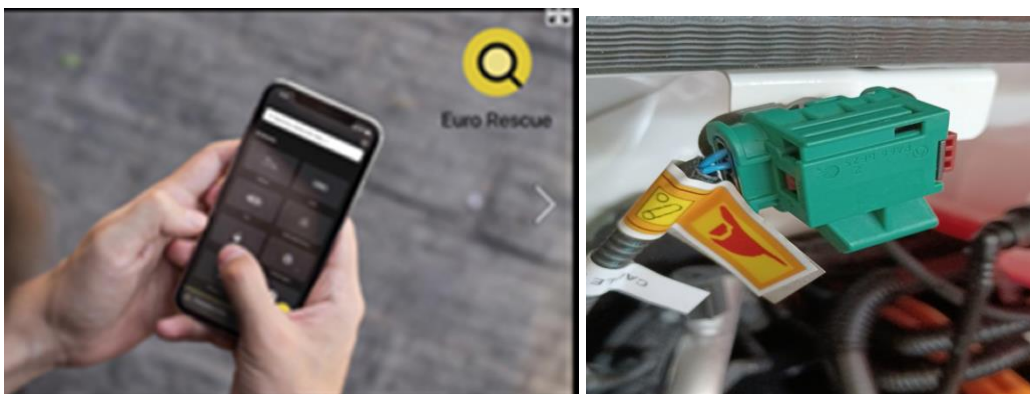
CTIF is partner in the working group that has been installed to review the standard ISO 17840-1: "Road vehicles – Information for first and second responders — Part 1: Rescue sheet for passenger cars and light commercial vehicles" Project leader is Celine Adalian. CTIF and ISO are approaching the fire 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.

2026 protocol is in progress with many great objectives: others supplementary e-call information, 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). 2026 protocol will be validated at the end of 2024.

Another big challenge will come at the end of 2024: 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.



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 and other international meeting during the past year.



Chief fire officer´s Association 65th Annual Conference Meath 2024, Ireland

Mikko Saastamoinen had presentation in this conference of project ISO 17840, which also included parts of project EuroNCAP and case, of using EURORESCUE-application. It was a success. They also add the first ISO-stickers on their fire truck in Ireland. It was part of show of vehicles fire and after that they add that picture and took picture of it. It's been shared in different platforms in social media.



Collaboration between CCNR

CCNR approached CTIF at the end of 2023. We had first meeting with them at the beginning of 2024.

We invited them to our face-to-face meeting in Croatia. First, they accepted that invitation, but later they only participated in virtual meeting. We managed to achieve collaboration with them and spread project ISO to maritime



European Hydrogen Train the Trainer Programme for Responders

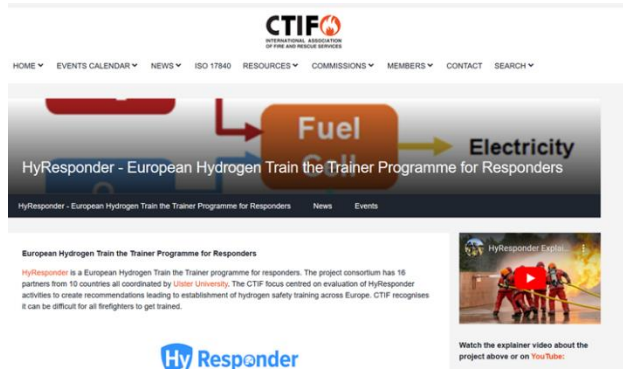
The European HyResponder Project, which has produced a Train the Trainer programme for first responders facing hydrogen emergencies concluded in early 2024. The consortium, of 16 partners from 10 countries coordinated by Ulster University, UK, included CTIF who ultimately produced a hydrogen safety training programme capable of adoption across Europe.

The CTIF inspired work is designed to provide an adaptable and resource provided programme that recognises the practicalities of training firefighters who are often restricted in reaching centralised training facilities due time, travel distance, personal cost and are sometimes constrained by an absence of special practical facilities.

The CTIF programme and other instructional materials is freely available on our website. The emphasis is upon the first responder firefighter crew and concentrate upon the basics to ensure personal and others safety is paramount by having sufficient emergency response information about hydrogen gas itself and the inherent risks posed from an alternative fuel that is growing in popularity.

Constructed around a series of specific packages the information provided offers a fire and rescue organisation the opportunity to build a meaningful response training course to meet their local area needs for a series of common events such as leaks or fires from vehicles or structures. Linked to local standard operational practices this should enhance knowledge, skills and offer virtual and some practical experiences.

The material provided is also directly linked to emergency response guidance and scientific information for use by individuals with special responsibilities like Crew and Incident Commanders and HAZMAT Officers. Multiple media is also provided such as written lectures, short videos and virtual reality simulation. This supports self-study and centrally organised practical training or special hydrogen focused events that bring groups together can be used to learn



The clear educational value to enhance safe operational response is apparent to enable widespread adoption in Europe, accompanied by a revised European Emergency Response Guide, the media is available in multi lingual formats that include Czech, Dutch, English, French, German, Italian, Norwegian and Spanish. In further support of the work the Belgium CTIF has also produced a multi lingual lecture on hydrogen that is available on the CTIF website.

<https://ctif.org/commissions-and-groups/hyresponder-european-hydrogen-train-trainer-programme-responders>