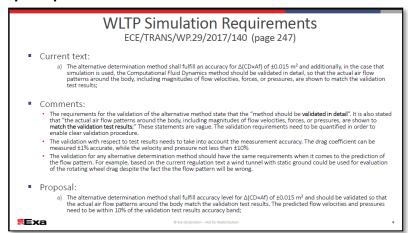
# Report of New Issues TF –CFD\* wg Kick-Off meeting

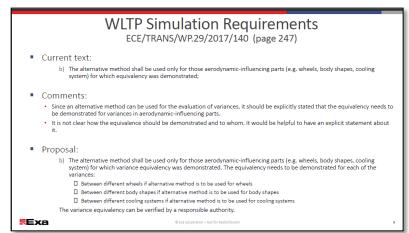
\*CFD: Computational Fluid Dynamics method, method to simulate aero drag

Apr., 2018
Mayumi "Sophie" Morimoto (JASIC)

### **Background of CFD wg under New Issues TF**

■ During Dec. 2017 New Issues TF meeting, Exa (software vender) proposed revisions to text related to CFD in Annex 7 of GTR 15.





■ During Mar. 2018 New Issues TF meeting in Paris, Japan proposed to compose a CFD expert working group as a reply to Exa proposal.

TF members agreed Japan to compose the member list and lead a kick-off

meeting of CFD expert working group.

#### Comments by Japan

- We should consider these text revisions after we discuss to create a concrete regulatory text like Paragraph 3.2. of Annex 4 Wind tunnel criteria. Or, after we discuss whether we should create a regulatory text like Paragraph 3.2. or not, at first.
- To do this, we propose to set a separate working group in New Issues TF for discussion of CFD and invite specialists from software venders and vehicle manufacturers. And in that TF, we discuss Terms of Reference (ToR) at first, then solve those problems.
- If there are any requests on urgent discussions on this from software venders and vehicle manufacturers, they should make clear on the proposal of regulatory text development plan.

[Example of discussion timeline in UN]

- To finalize GTR in 2019 summer: Need to finish discussion within 2018. (Preferably by Sep. 2018.)
- · To finalize GTR in 2020 summer: Need to finish discussion by Sep. 2020.

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### Members of CFD wg under New Issues TF

Full Name	Company	Full Name	Company
Domenico Caridi	ANSYS	Denis Ricot	Renault
Hiroshi Yukawa	ANSYS	Keiji ONISHI	RIKEN
Takeshi Okada	ANSYS	Peter Altmann	Siemens PL
Jan Czarnota	Audi AG	Frederick Ross	Siemens PL
Christoph Lueginger	BMW AG	Jeremy Dahan	Siemens PL
Thomas Schütz	BMW AG	Jan Jagrik	Skoda Auto
Holger Gau	BMW AG	Radek Svanhal	Skoda Auto
Kazuki Oota	DAIHATSU MOTOR CO.,LTD.	Takumi Hasegawa	SUBARU
Thomas Schumacher	Engys	Masanori Uchida	SUBARU
Ales Alajbegovic	Exa, Dassault Systemez	Atsushi Miura	SUZUKI MOTOR CORPORATION
Richard Shock	Exa	Tomoaki Takeda	SUZUKI MOTOR CORPORATION
Hans-Dieter Glueck	Ford Werke GmbH	Takahiro Kumano	SUZUKI MOTOR CORPORATION
Gensuke Hoshino	Honda R&D	Antoine Delacroix	Toyota Motor Europe
Minoru Teramura	Honda R&D	Carsten Repmann	Volkswagen
Adrian Gaylard	Jaguar Land Rover	Axel Fischer	Volkswagen
Wilko Jansen	Jaguar Land Rover	Hardy Schmidt	Volkswagen
Tim Walker	Jaguar Land Rover	Erik Sällström	Volvo Cars
Makoto TSUBOKURA	Kobe Univ./RIKEN	Torgny Karlsson	Volvo Cars
Kousuke NAKASATO	NISSAN	Zbynek Hrncir	ICON
Hideyuki KAWAMATA	NISSAN		

☐ Software vender, ☐ Vehicle manufacturer, New Issues TF members attending CFD wg is not counted

#### 1. Certification criteria of CFD simulation model

Air flow patterns, delta-cw accuracy, etc.

#### 2. Certification demonstration/process of CFD simulation model

- Equivalency validation
- Validation of CFD simulation models by software vender/manufacturer
- Documentation format, etc.

# 3. Certification process of vehicle aero drag using CFD simulation model

 Evidence of CFD result (How to prove the usage of authorised simulation method)

#### 4. Re-certification criteria of CFD simulation model

Define what is "change in simulation model"

## 5. Certification scope using CFD simulation model (NEWLY raised after kick-off meeting)

R/L family are not relevant with aerodynamic drags.

## 6. Certification motivation using CFD simulation model (NEWLY raised after kick-off meeting)

• CFD process must be feasible, reasonable, time/resource consumption

## **Next Actions/Request for Consideration**

#### Next Actions

- Discussion points raised by member will be prioritized.
- The timeline will be set based on the volume of discussion points. (Agreed not to incorporate into Amendment#5 on Sep. 2018)

#### Request by some member

Hold a face-to-face meeting for 2 days.
 (40 or more members expected to join at the maximum)

#### Request to CPs/TAs and IWG

Since there are several points which need CPs/TAs involvement in the discussion.

- Request attendees from CPs and TAs, like other TFs.
- If CPs and TAs are difficult to send attendees to CFD wg, need guidance from WLTP IWG, CPs, and TAs, how to proceed CFD wg.

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# Thank you very much for your attention!