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Stimulating innovation
Supporting legislation

CO2MPAS
DICE Workflow

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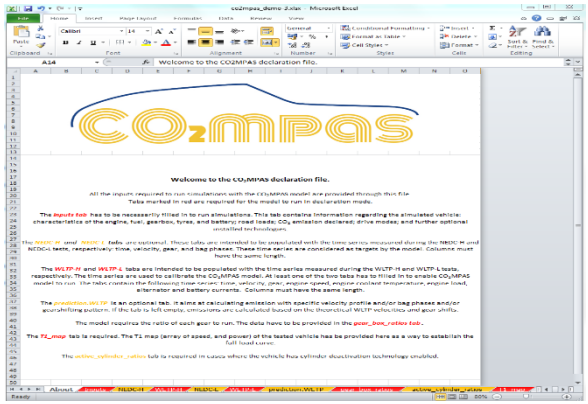
CO_2MPAS Input file
(in *"declaration mode"*)



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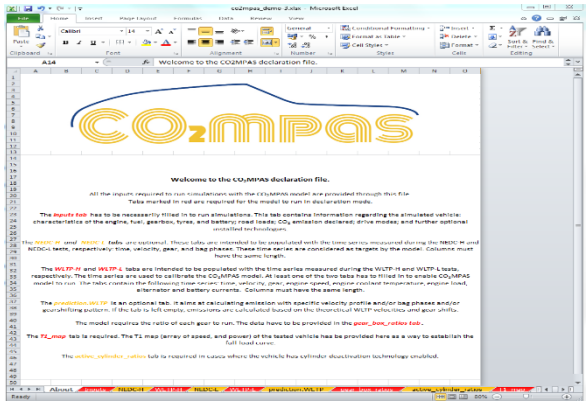
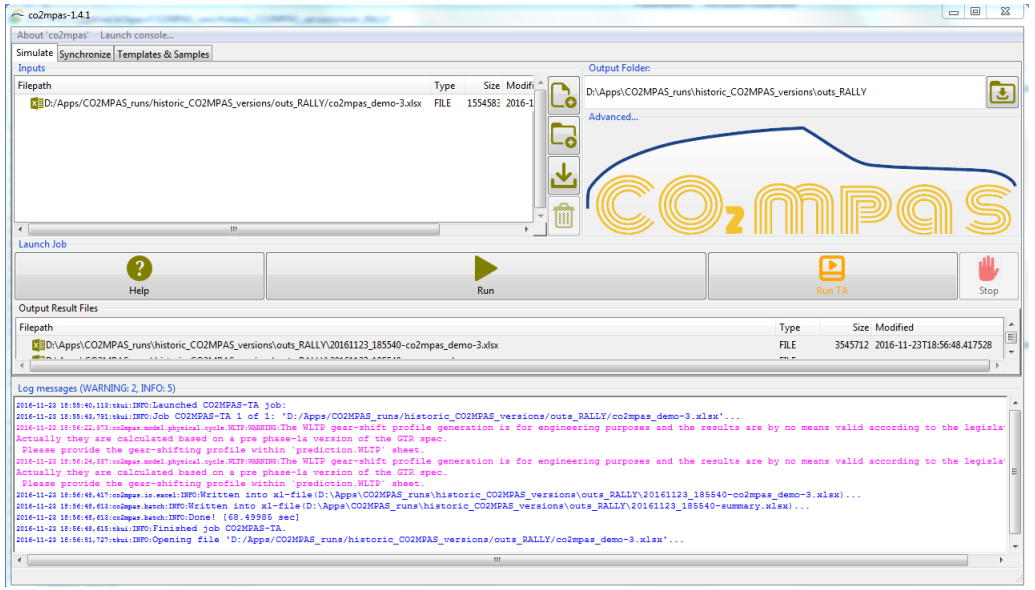
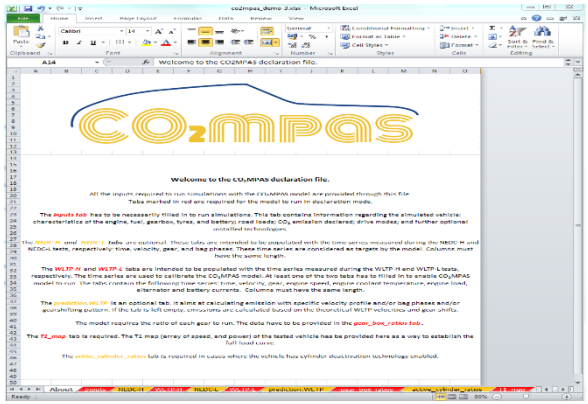
CO_2MPAS Input file
(in *"declaration mode"*)



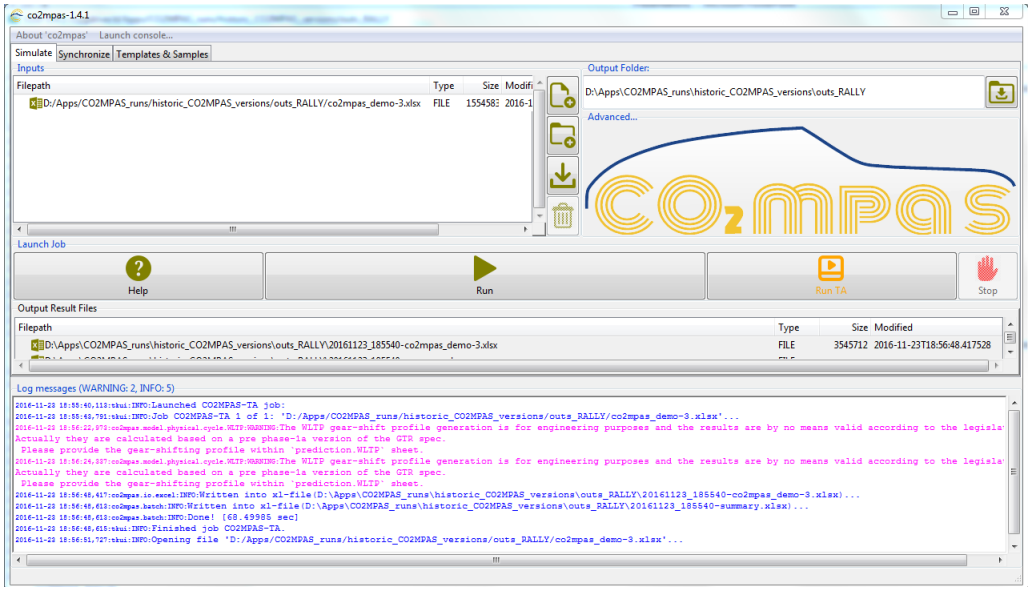
CO_2MPAS Type Approval command
("*Run TA*" button)



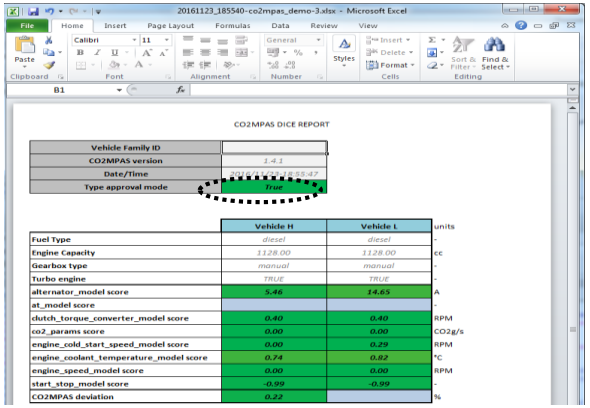
CO_2MPAS Input file
(in *"declaration mode"*)



CO_2MPAS Type Approval command
("*Run TA*" button)



CO_2MPAS Output file
(includes DICE & OUT Reports)



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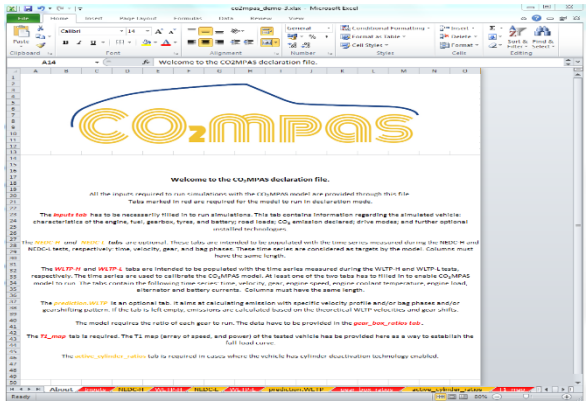
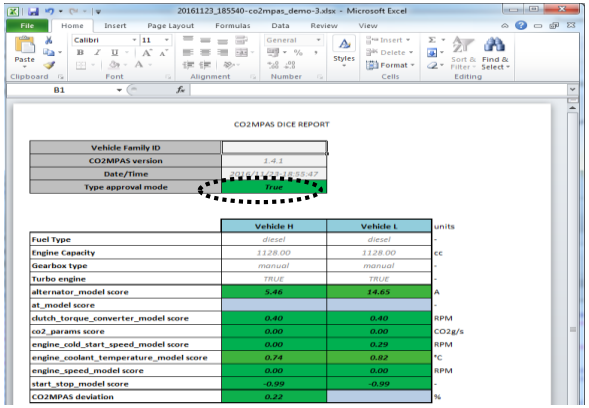
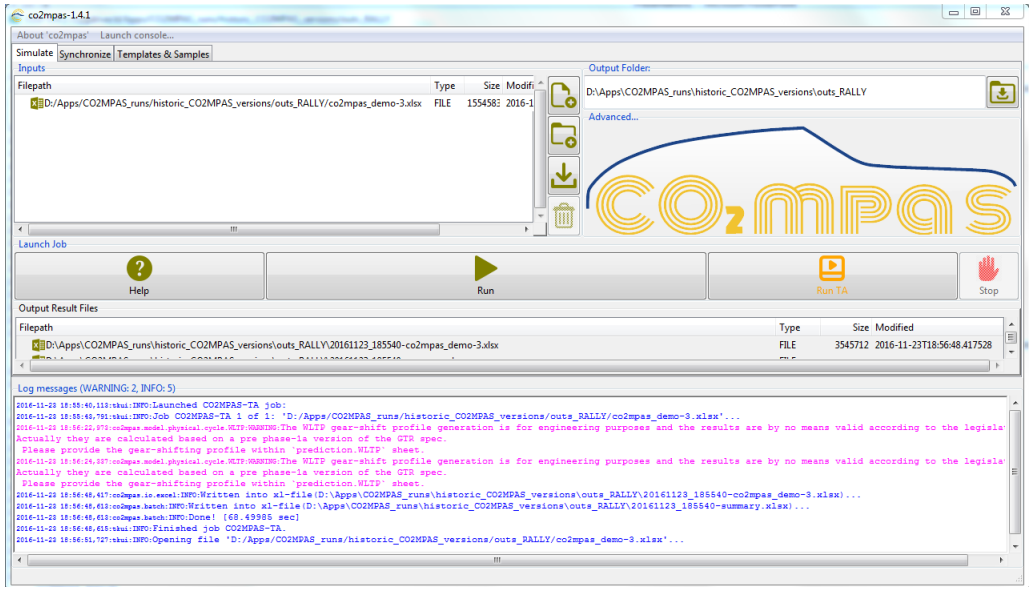
CO_2MPAS Input file
(in *"declaration mode"*)



CO_2MPAS Output file
(includes DICE & OUT Reports)



CO_2MPAS Type Approval command
("*Run TA*" button)



"fingerprint "
all files

Input + Output =>
Hash #1: *9fcdef88aea75363aa8e1eb0b75*

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Input + Output =>

Hash #1: *9fcdef88aea75363aa8e1eb0b75*

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Timestamp server: generates a time-stamp (*random number*) of **what files** are sent **when**.

The stamp is a "witness" that the files have *indeed* been sent (sender cannot *repudiate* later)

DICE email :=

Hash #1+ DICE Report

Input + Output =>

Hash #1: *9fcdef88aea75363aa8e1eb0b75*

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Recipients:
- TS (“*sender*”)
- TAA
- JRC
- DG. CLIMA

DICE stamp :=

DICE email + random number

Timestamp server: generates a time-stamp (*random number*) of **what files** are sent **when**.

The stamp is a “witness” that the files have *indeed* been sent (sender cannot *repudiate* later)

DICE email :=

Hash #1+ DICE Report

Input + Output =>

Hash #1: *9fcdef88aea75363aa8e1eb0b75*

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DICE

copy & paste the *random number* into CO_2MPAS DICE

(tab in the GUI, under development)

Recipients:
- TS (“*sender*”)
- TAA
- JRC
- DG. CLIMA

DICE stamp :=

DICE email + random number

Timestamp server: generates a time-stamp (*random number*) of **what files** are sent **when**.

The stamp is a “witness” that the files have *indeed* been sent (sender cannot *repudiate* later)

DICE email :=

Hash #1+ DICE Report

Input + Output =>

Hash #1: *9fcdef88aea75363aa8e1eb0b75*

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DICE

copy & paste the *random number* into CO_2MPAS DICE

(tab in the GUI, under development)

Recipients:
- TS (“*sender*”)
- TAA
- JRC
- DG. CLIMA

DICE Decision:=
DICE Report + OK/SAMPLE
(to be included in **TAA e-files**)

DICE stamp :=
DICE email + random number

Timestamp server: generates a time-stamp (*random number*) of **what files** are sent **when**.

The stamp is a “witness” that the files have *indeed* been sent (sender cannot *repudiate* later)

Input + Output + Decision =>
Hash #2: *cc805b4772e78f59570bd8883e*

DICE email :=
Hash #1+ DICE Report

Input + Output =>
Hash #1: *9fcdef88aea75363aa8e1eb0b75*

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DICE

copy & paste the *random number* into CO_2MPAS DICE

(tab in the GUI, under development)

Recipients:
- TS (“*sender*”)
- TAA
- JRC
- DG. CLIMA

DICE Decision:=
DICE Report + OK/SAMPLE
(to be included in **TAA e-files**)

DICE stamp :=
DICE email + random number

Timestamp server: generates a time-stamp (*random number*) of **what files** are sent **when**.

The stamp is a “witness” that the files have *indeed* been sent (sender cannot *repudiate* later)

Input + Output + Decision =>
Hash #2: *cc805b4772e78f59570bd8883e*

DICE email :=
Hash #1+ DICE Report

TAA report :=
OUT Report + OK/SAMPLE + HASH 2
(to be included in **TA printed docs**)

PDF

Input + Output =>
Hash #1: *9fcdef88aea75363aa8e1eb0b75*

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Input + Output + Decision =>
Hash #2: *cc805b4772e78f59570bd8883e*

Input + Output =>
Hash #1: *9fcdef88aea75363aa8e1eb0b75*

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Hash #2 sent to TAA is along with all e-files, and it is *unequivocally* associated with:

- The CO_2MPAS Input file contents;
- The CO_2MPAS Output file contents;
- Who sent the file for type approving;
- When the file was sent;
- What was the result of the dice (OK/SAMPLE).

Input + Output + Decision =>
Hash #2: *cc805b4772e78f59570bd8883e*

The *"printed"* TAA Report is *unequivocally* associated with the above Hash #2 and contains all key simulation results.

Timestamp Hash #1 distributed to Supervising bodies is *unequivocally* associated to Input & Output.

Input + Output =>
Hash #1: *9fcdef88aea75363aa8e1eb0b75*

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OUTPUT report sample

Vehicle Family ID	
CO2MPAS version	*1.4.3.dev0*
Date/Time	*2016/11/22-15:03:28*
Type approval mode	***True***

NEDC Average Specific CO2 Emissions*	Vehicle H	Vehicle L	units
NEDC CO2 declared value	*147.21*		g/km
NEDC CO2MPAS simulated	*141.12*		g/km
CO2MPAS deviation	***-4.14***		%

*Ki factor - corrected

NEDC CO2MPAS CO2 Emissions	Vehicle H	Vehicle L	
CO2MPAS simulated NEDC	*141.12*		g/km
CO2MPAS simulated UDC	*133.81*		g/km
CO2MPAS simulated EUDC	*145.36*		g/km

NEDC Inputs	Vehicle H	Vehicle L	
F0	*216.21*		N
F1	*0.8790*		N/km/h
F2	*0.0436*		N/(km/h)2
Inertia	*1723.0*		kg
WLTP Inputs	**Vehicle H**	**Vehicle L**	
F0	*222.21*		N
F1	*0.8920*		N/km/h
F2	*0.0436*		N/(km/h)2
Test Mass	*1873.0*		kg
CO2 emission phase Low	*156.89*		g/km
CO2 emission phase Medium	*150.53*		g/km
CO2 emission phase High	*149.54*		g/km
CO2 emission phase Extra-High	*195.93*		g/km

CO2MPAS

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DICE report sample

Vehicle Family ID	
CO2MPAS version	*1.4.3.dev0*
Date/Time	*2016/11/22-15:03:28*
Type approval mode	***True***

	Vehicle H	**Vehicle L**	units
Fuel Type	*diesel*	*diesel*	-
Engine Capacity	*997.00*	*997.00*	cc
Gearbox type	*automatic*	*automatic*	-
Turbo engine	*TRUE*	*TRUE*	-
alternator_model score	***4.56***		A
at_model score	***-0.95***		-
clutch_torque_converter_model score	***4.71***		RPM
co2_params score	***0.00***		CO2g/s
engine_cold_start_speed_model score	***18.74***		RPM
engine_coolant_temperature_model score	***0.51***		°C
engine_speed_model score	***0.02***	***91.36***	RPM
start_stop_model score	***-0.99***		-
CO2MPAS deviation	***-4.14***		%

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