IDAJ CAE Solution Conference

Your True Partner for CAE&CFD

ICSC 2015

Process automation for 3D cylinder simulation

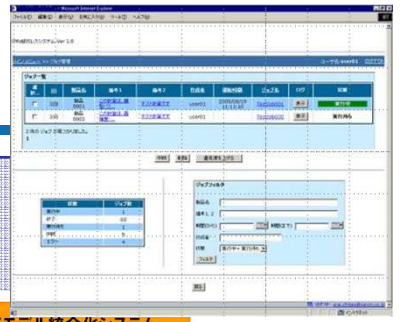
IDAJ
石原卓哉

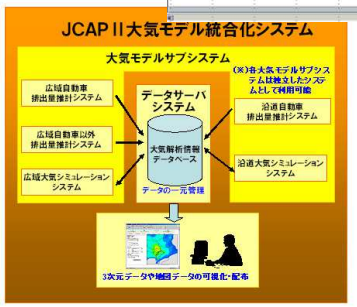
我的工作

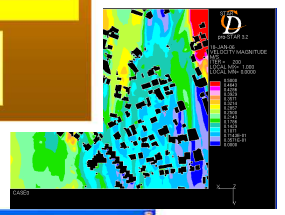
以CAE/CFD为中心的系统集成开发
IDAJ拥有多年的技术经验积累，
对广泛行业及应用对象的熟知，
对各种产品（包括非IDAJ销售产品）运用自如的经验，
可将之合并集成专业化系统。

Projects

Mazda	– PT-ECS easy CFD system (over 200 people use it for design process) – Aero dynamics system – Port flow simulation system – Other many systems…… (20 systems…)
Toyota	– Engine Simulation System – Crank Shaft Simulation system – Cooling water simulation tool etc…
Honda	– Optimization system Engine tools – Vehicle design Optimization
Nissan	– CHANGE (Engine performance system) – Port flow system etc…
Subaru	Light CAE (using ESTACION)
Isuzu	Visualize Simulation results
Daikin	– Outdoor unit simulation tools – Room environment simulation tools – Cost simulation by Sunshine simulation tool
CANON	EASA
JAXA	Simulation Database
Taisei	Flow Environment simulation system
KYB	EASA

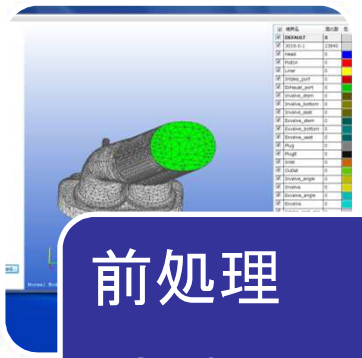






about 30 projects per year

系統概要

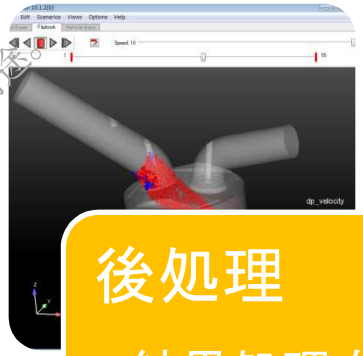


前処理

- Surface.dat 自動作成

計算

- 解析設定
- 計算投入



後処理

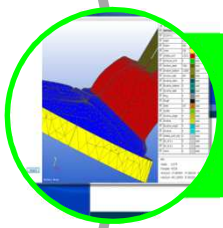
- 結果処理自動化

前处理

0. 概要

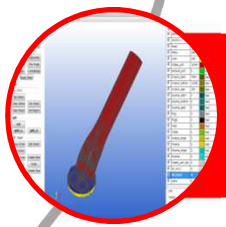
Wizard based operation

PROCESS NAVIGATION



Automatic： separate boundaries

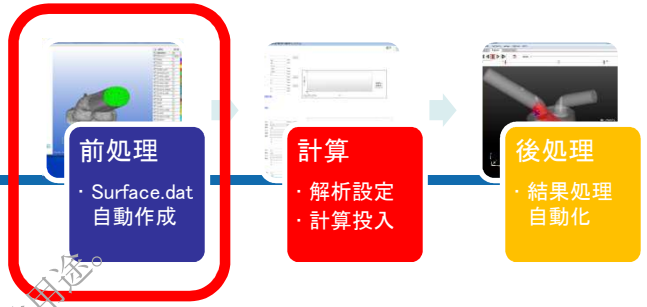
FAST OPERATION



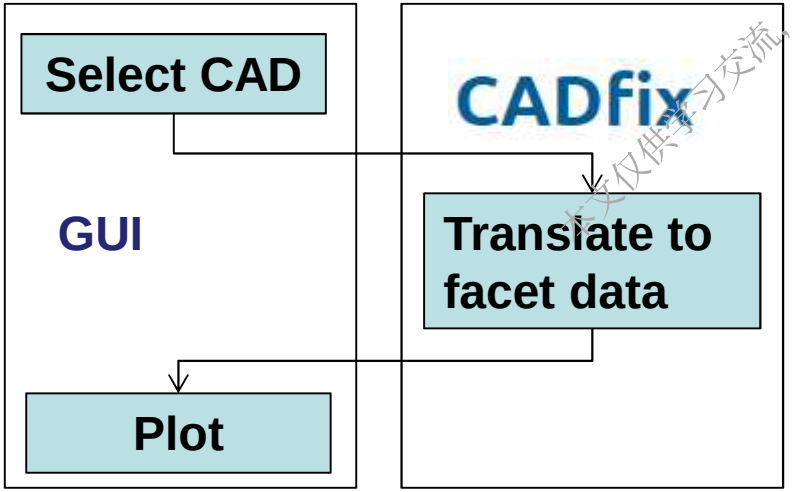
CAD data reader

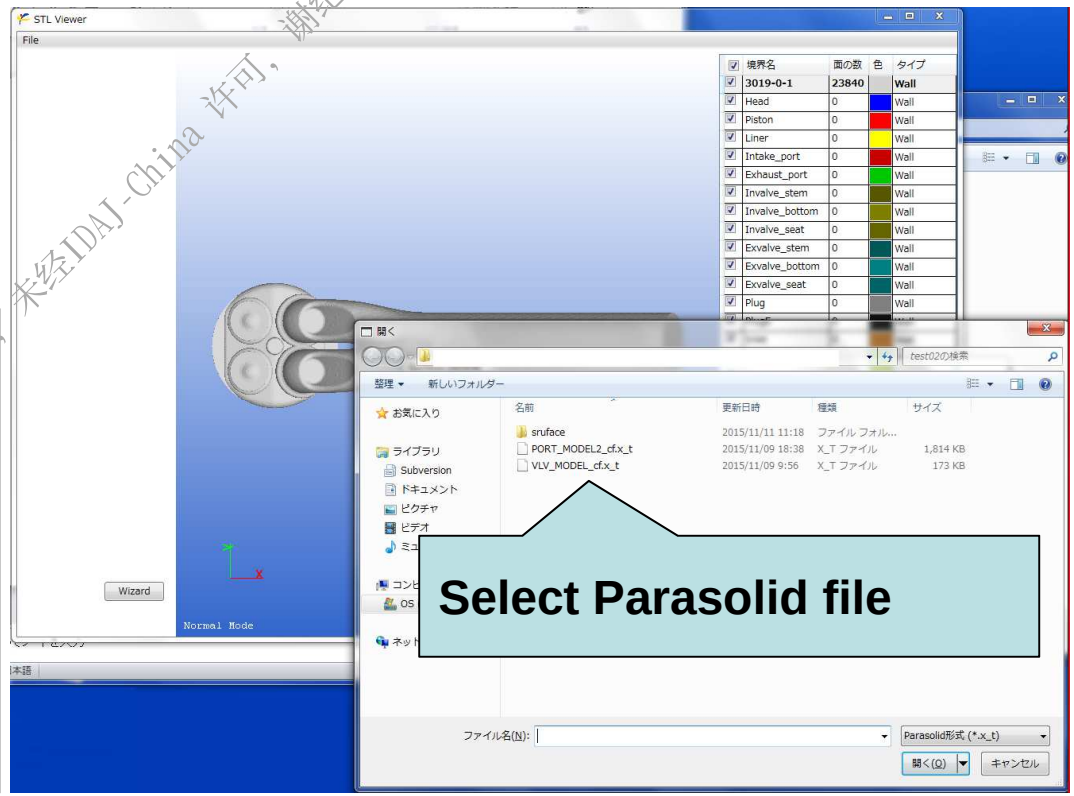
DIRECT INTERFACE

前処理



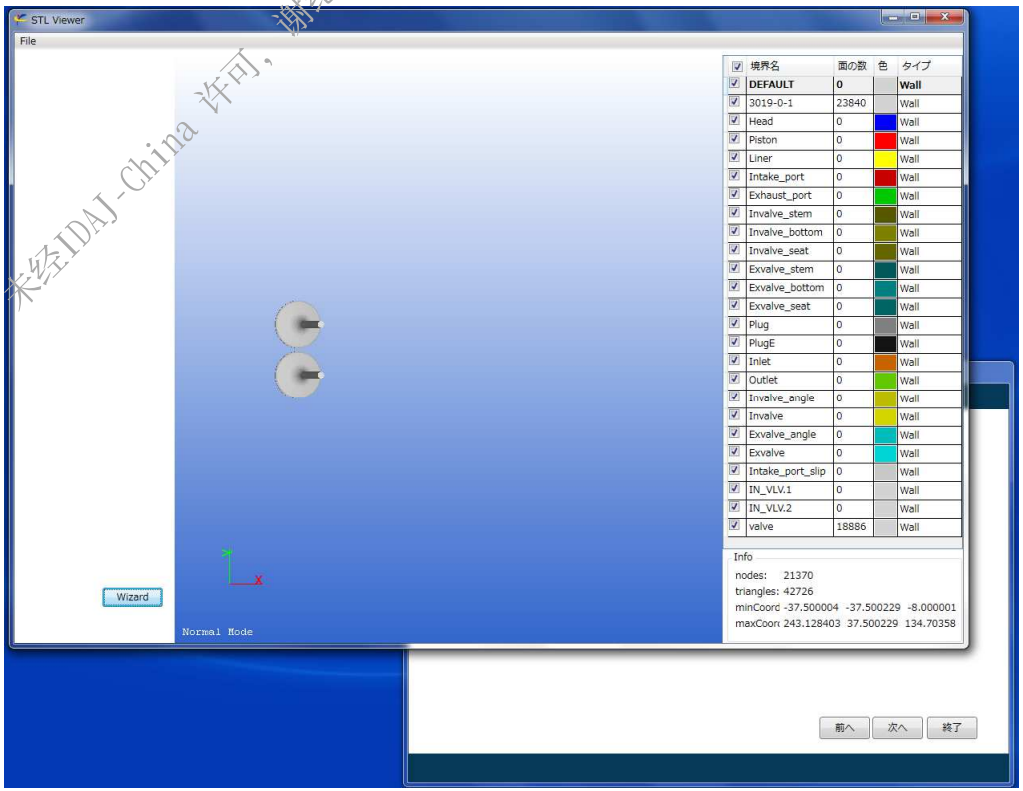
1. 燃焼室、吸気PORT　読込





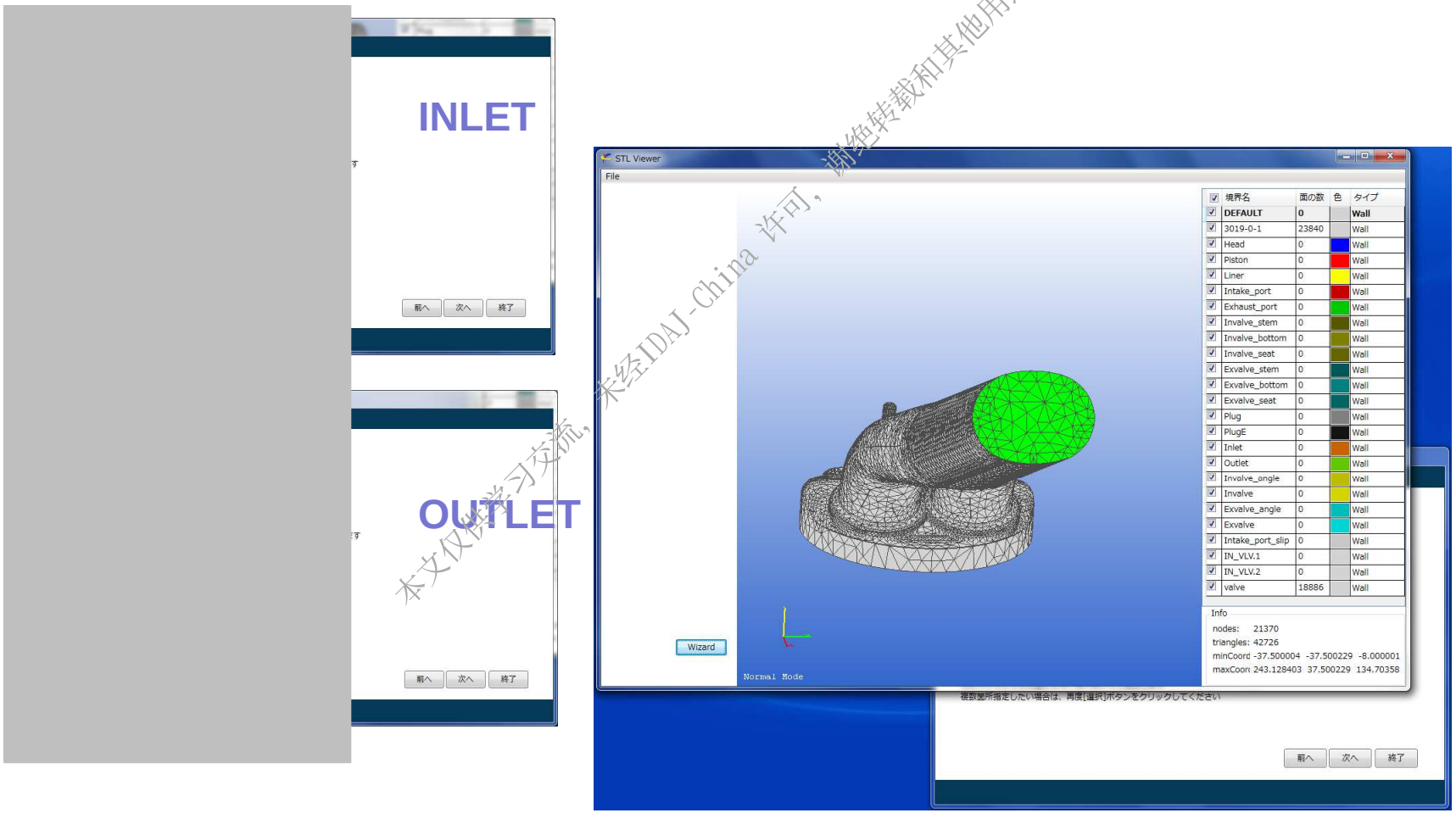
前処理

2. VALVE　読込



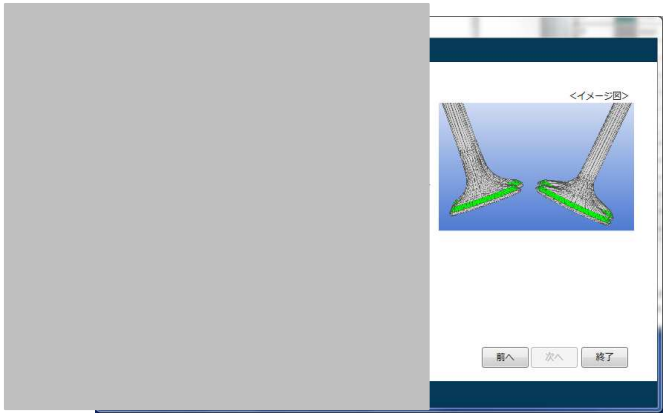
前处理

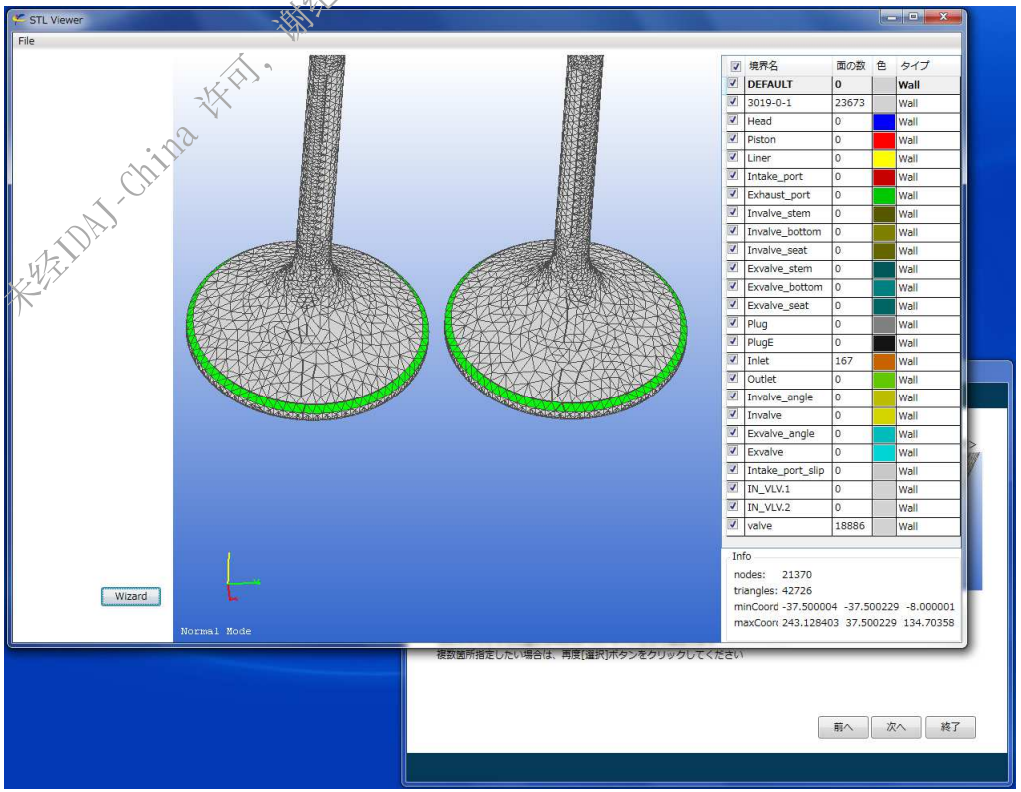
3. Select BOUNDARY Surface



前处理

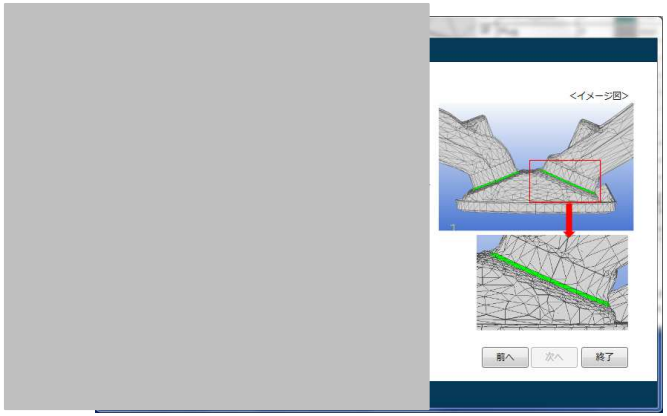
4. Select VALVE SHEETs

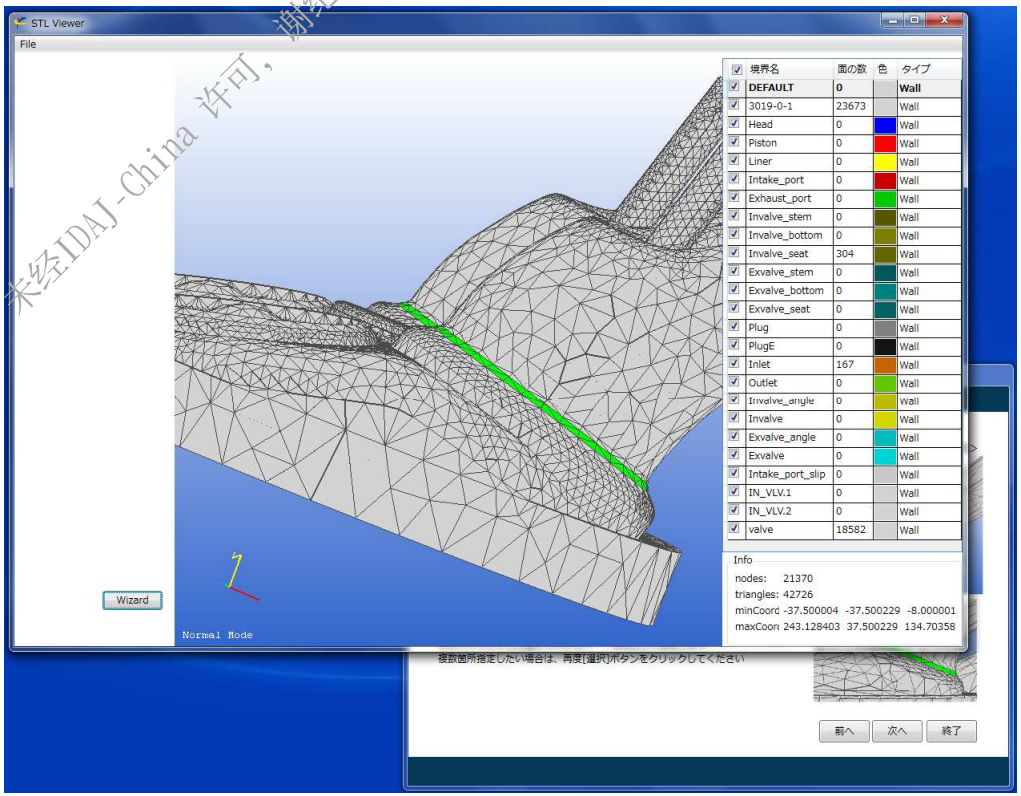




前处理

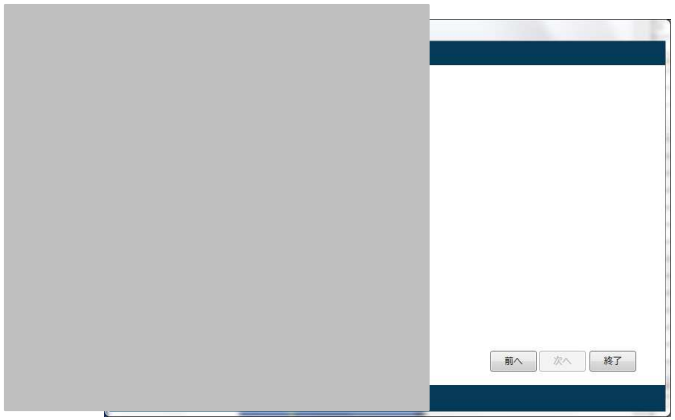
5. Select PORT Layers



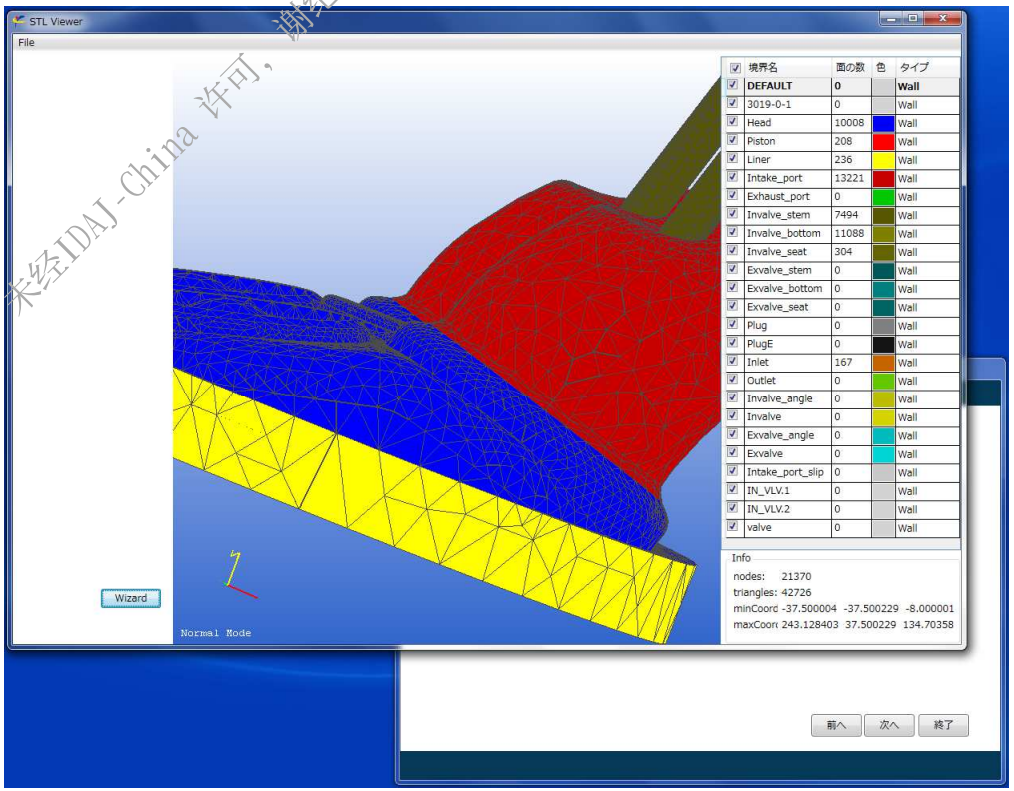


前处理

6. Set Bore value

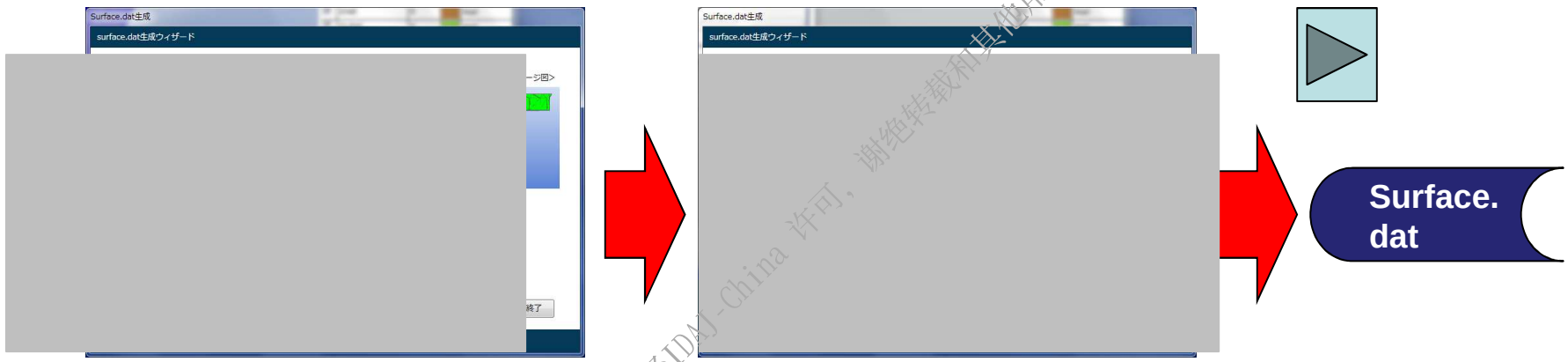


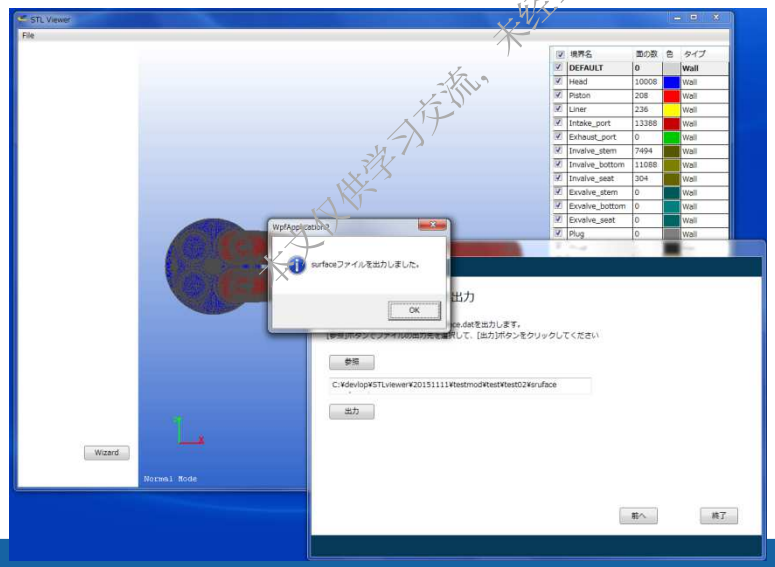
AUTO : Separate Surface boundaries

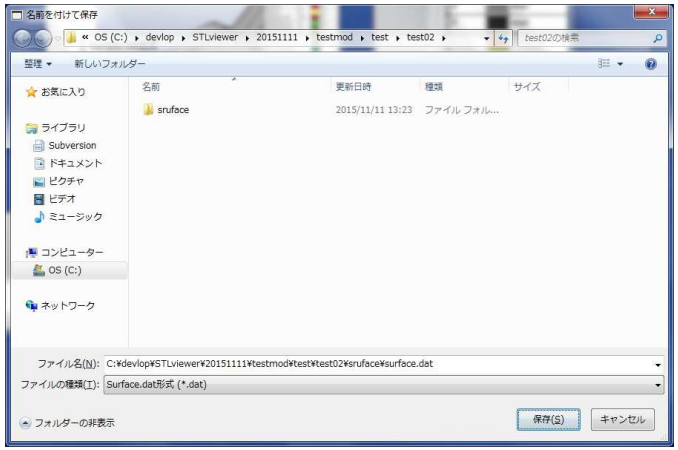


前处理

7. Plug setup, Write Surface.dat



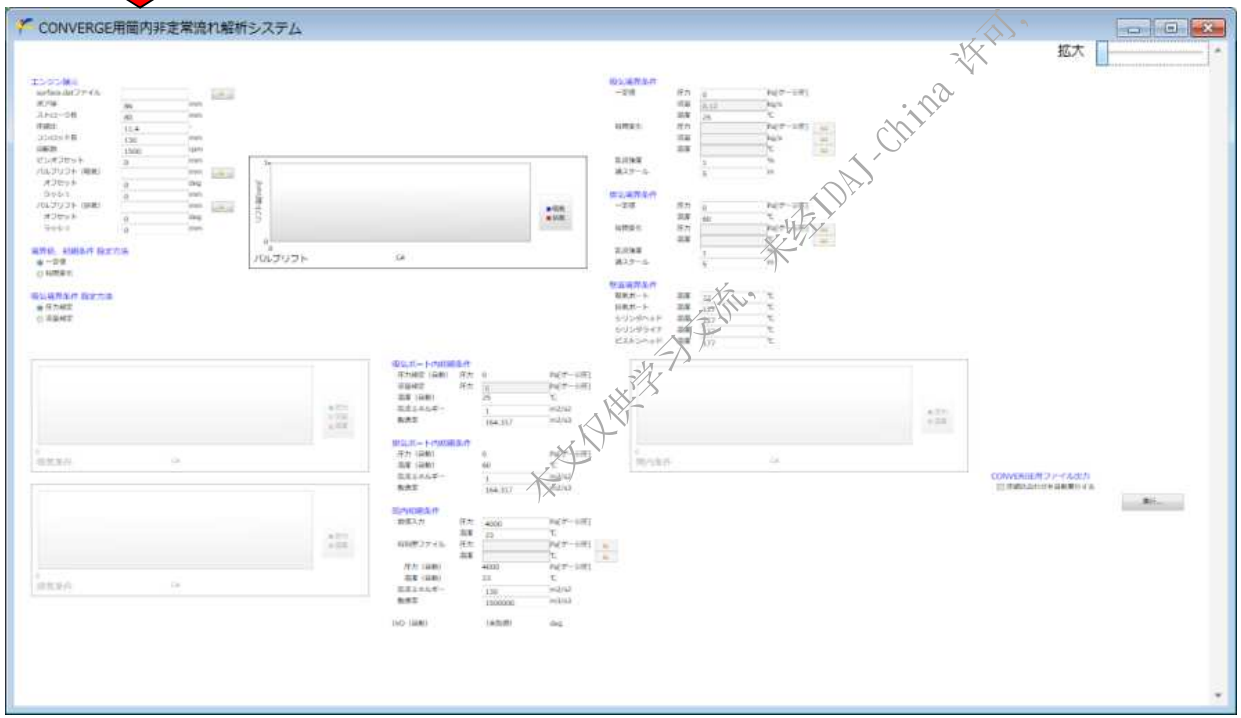


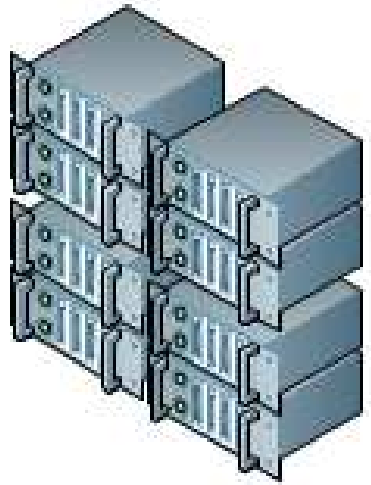


計算実行

1. GUI

Surface.
dat

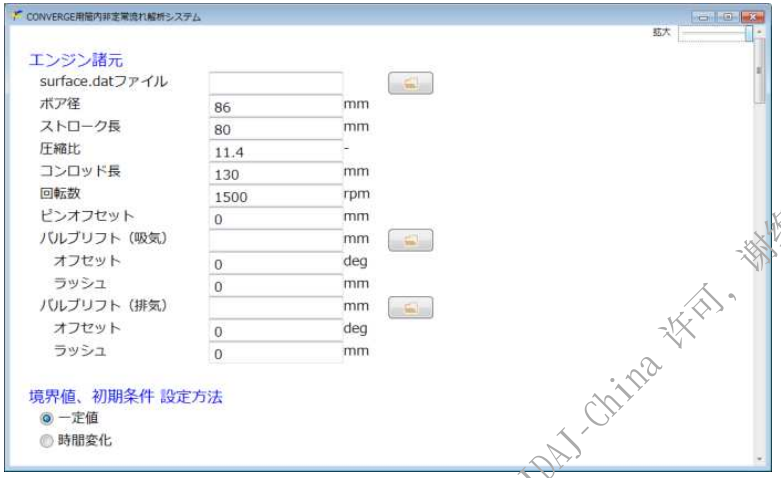




計算機

計算実行

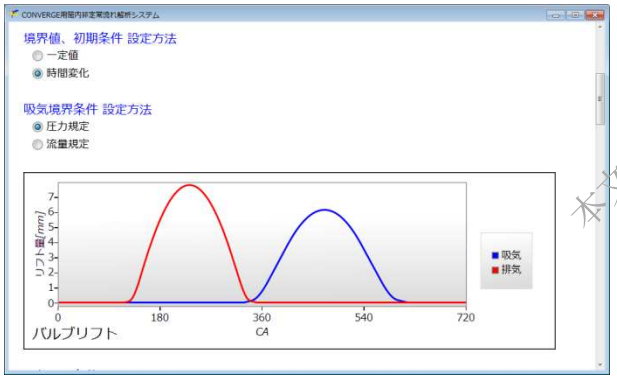
2. 機能



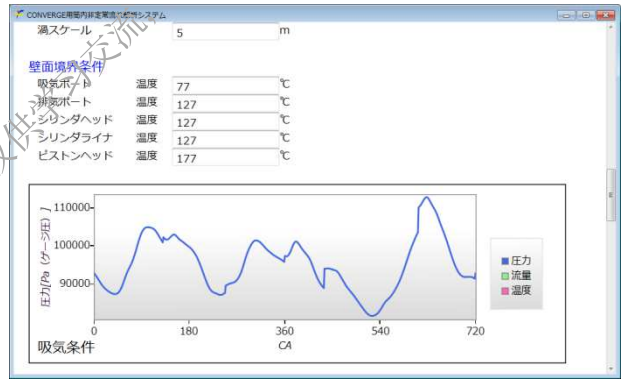
Surface.dat ： Engine specific

DEMO

From 境界条件、ValveLift
Automatic Set： Initial Condition



Valve lift 読込、可以Offset

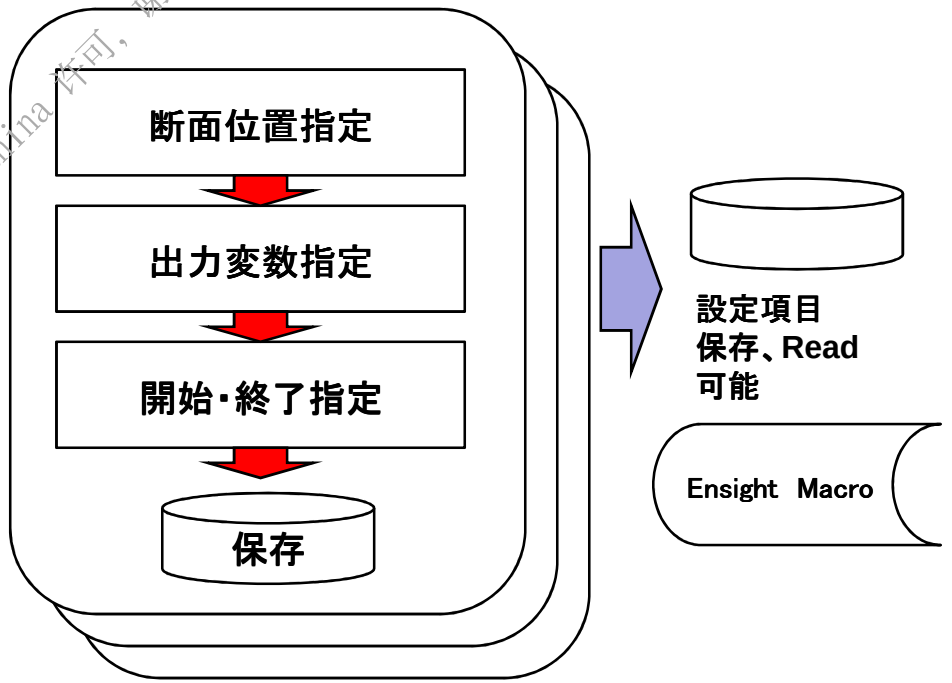


境界条件読込

解析実行

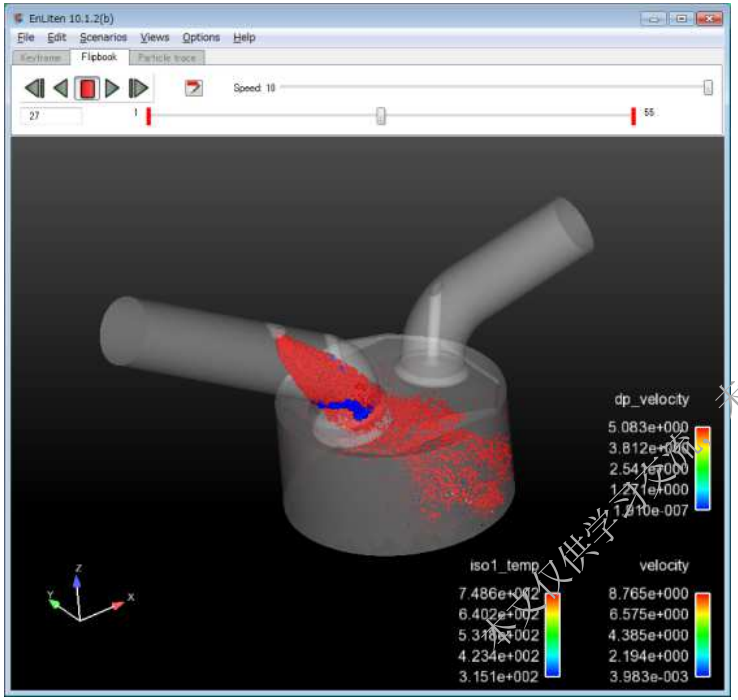
後処理

1. 概要

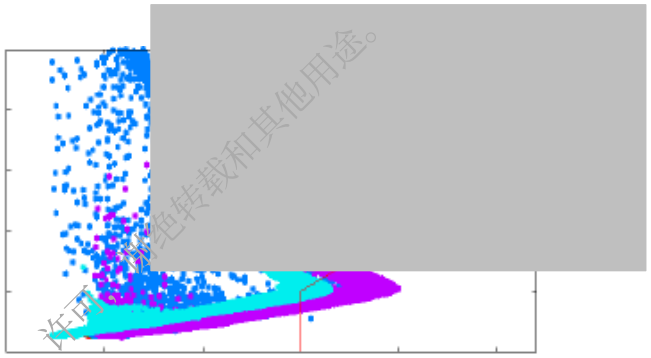


後処理

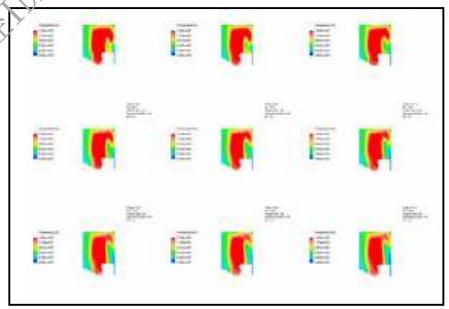
2. 出力図



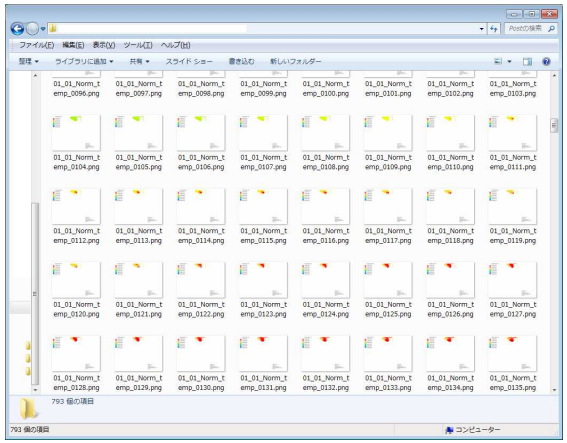
Enliten Files



Φ-T Map



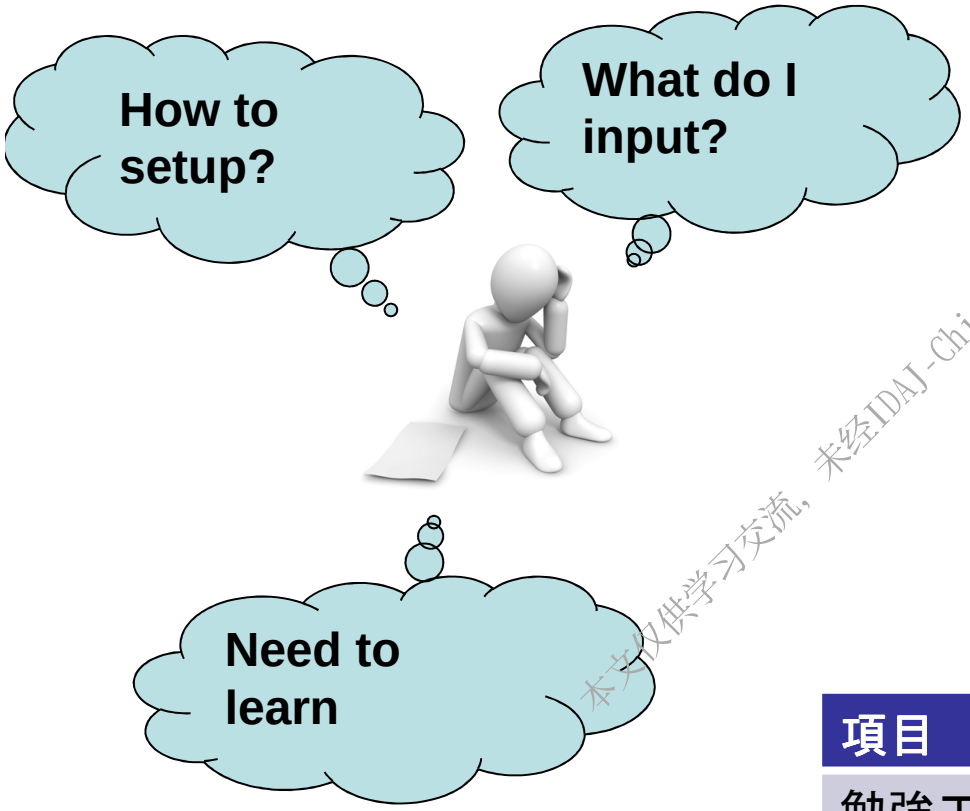
Report



Figure

効果

1. 簡単操作



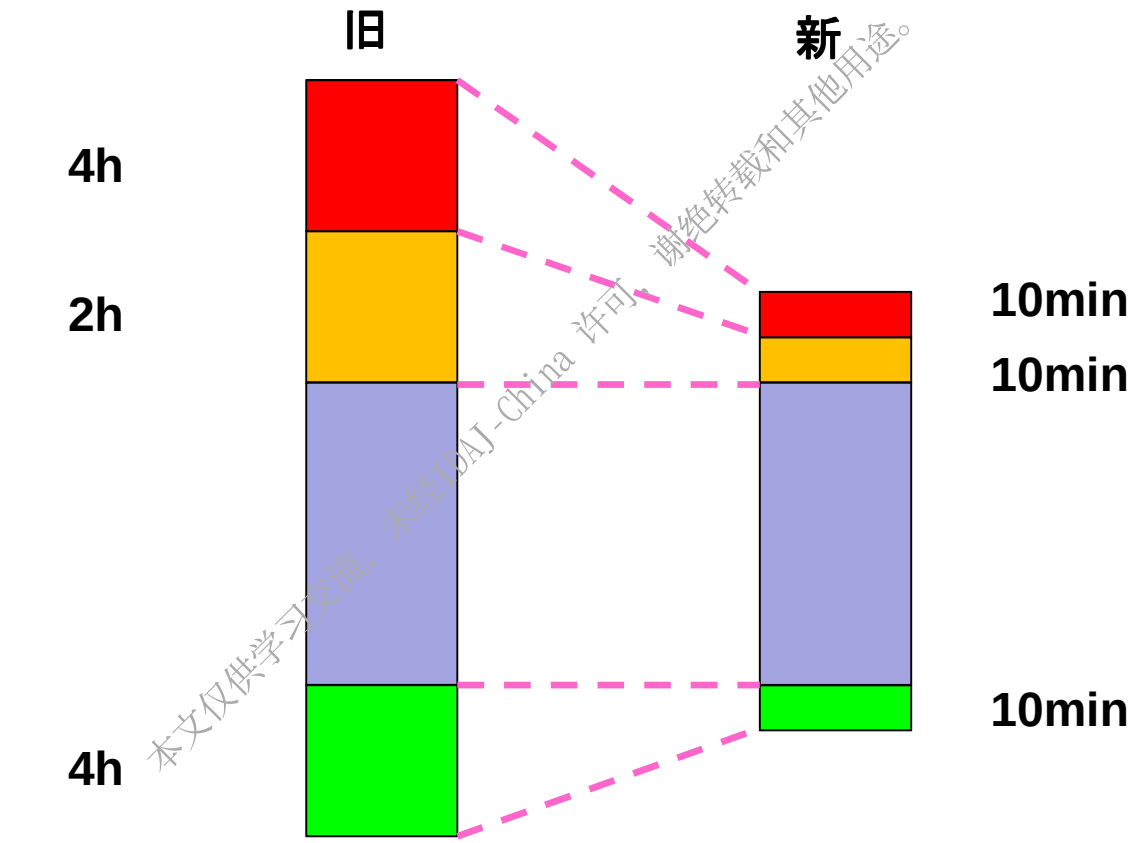
Easy understand

工数削減

項目	システム化前	システム化後
勉強工数	1-3 month	10min

效果

2. Speed



謝謝大家