

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

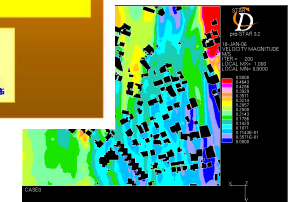
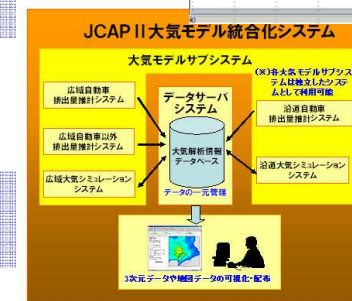
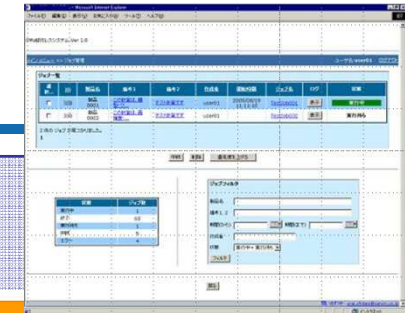
- Daikin**
- Outdoor unit simulation tools
 - Room environment simulation tools
 - Cost simulation by Sunshine simulation tool

- CANON** EASA

- JAXA** Simulation Database

- Taisei** Flow Environment simulation system

- KYB** EASA



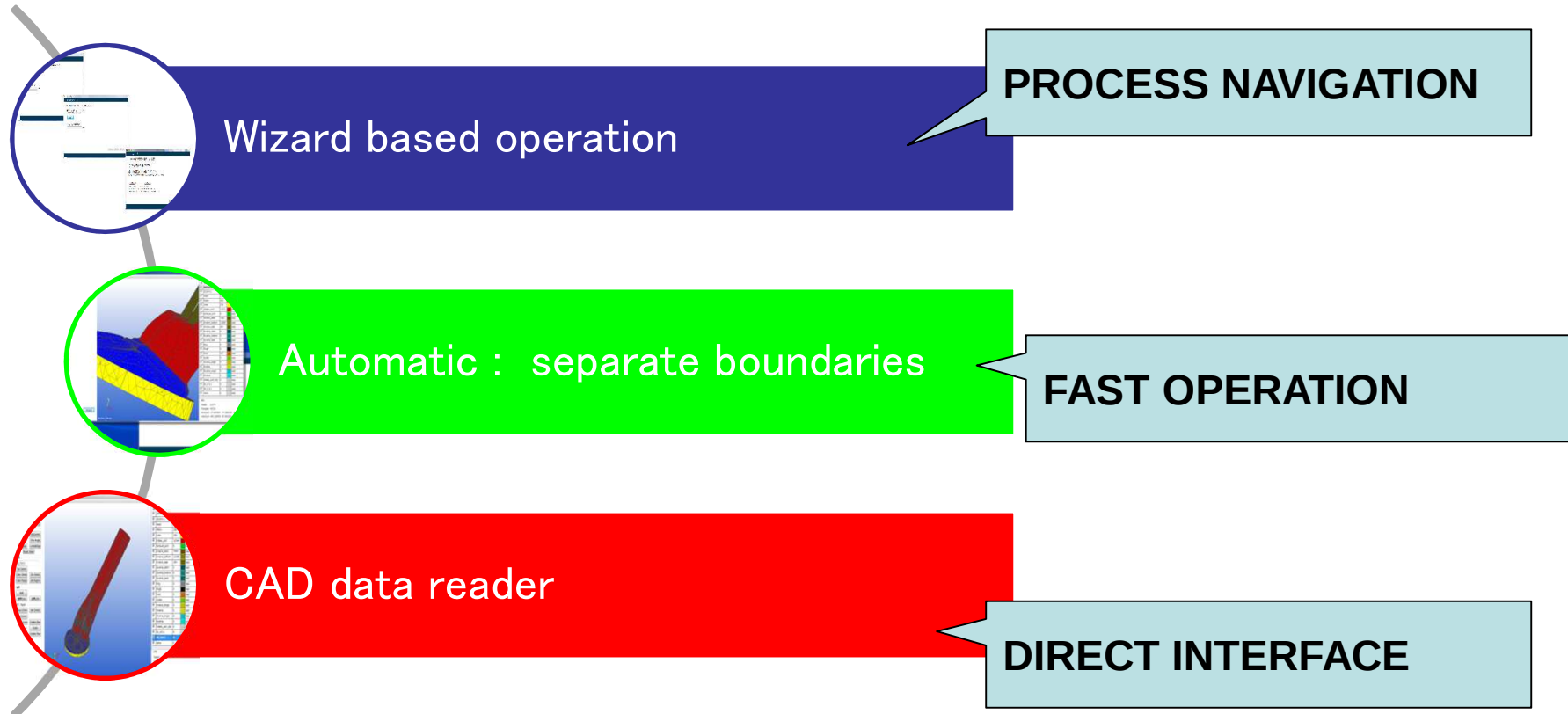
about 30 projects per year

系統概要



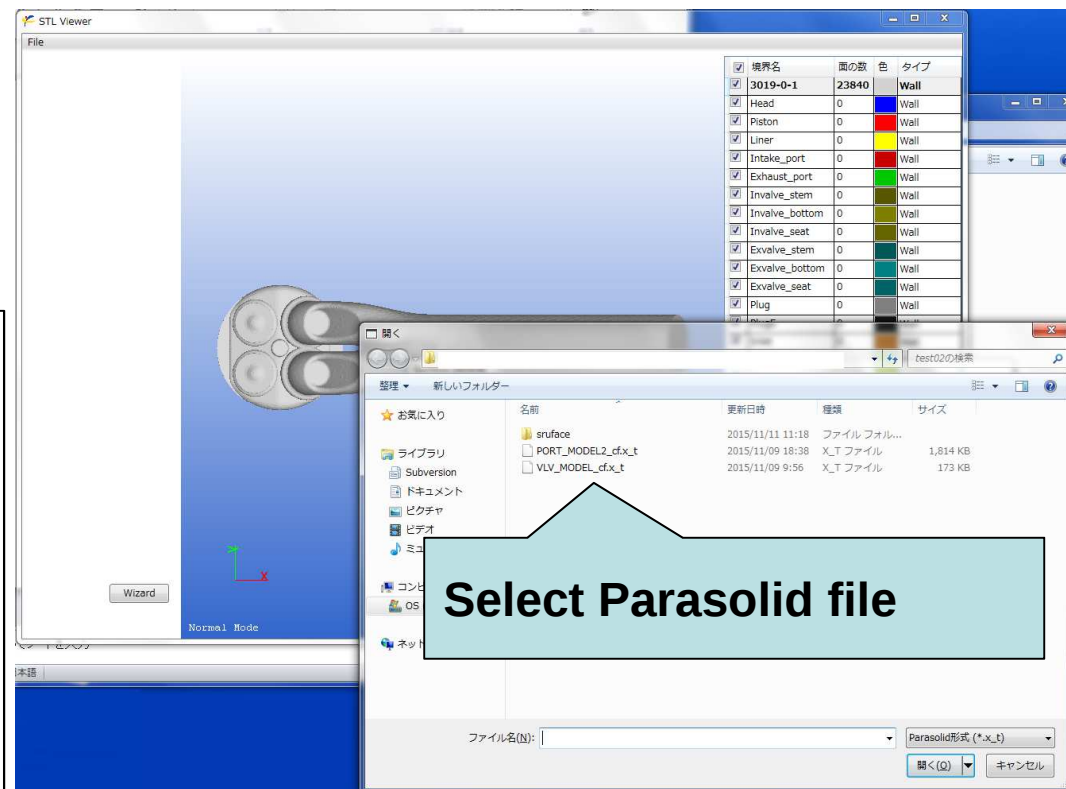
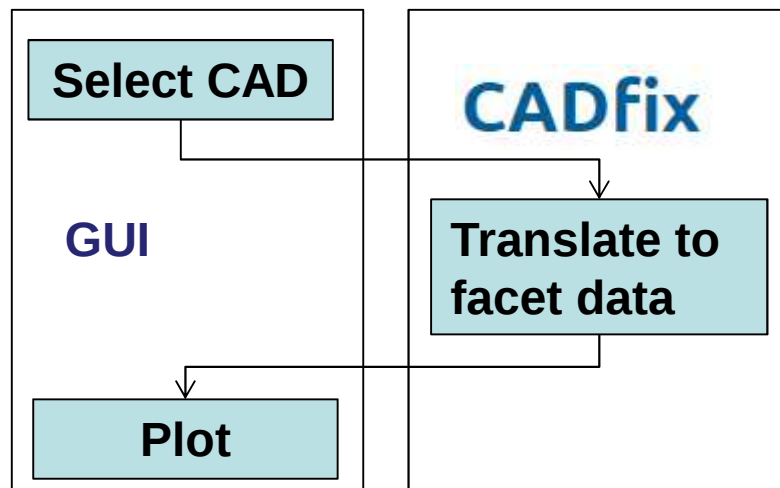
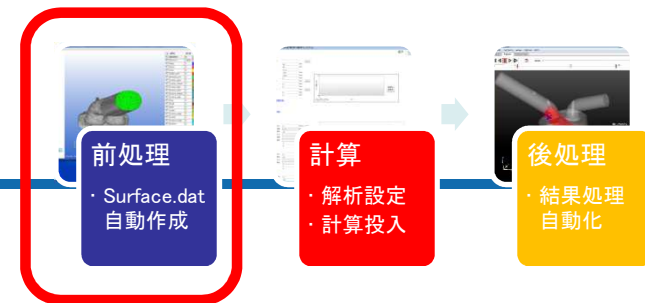
前处理

0. 概要



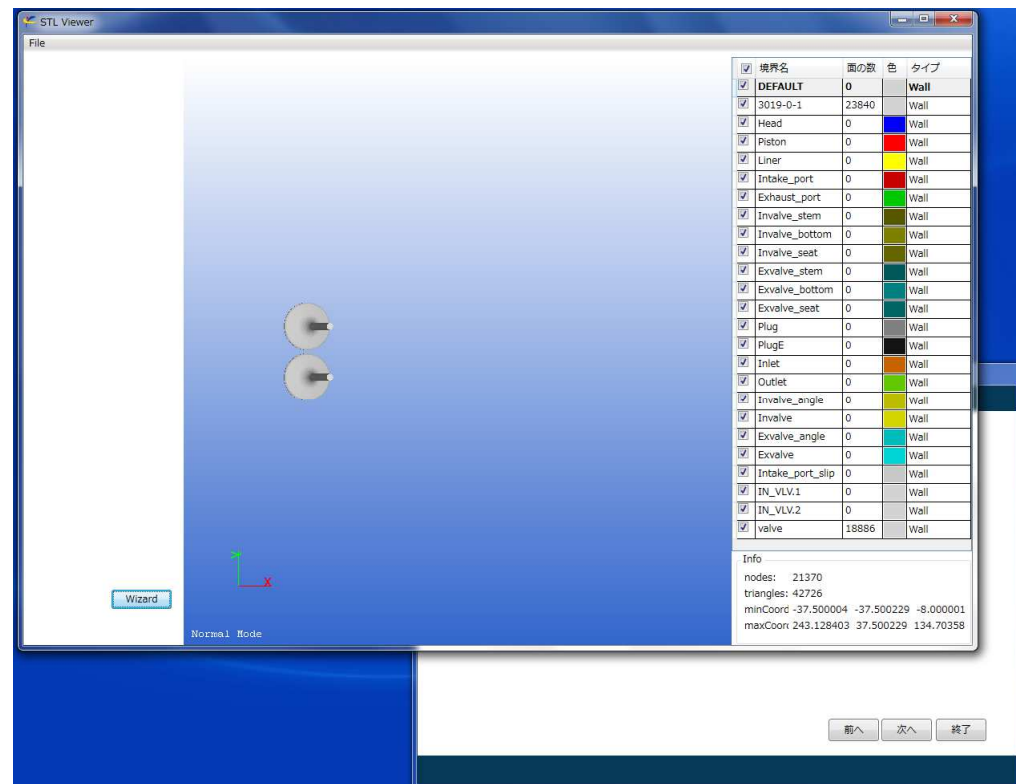
前処理

1. 燃烧室、吸気PORT 読込



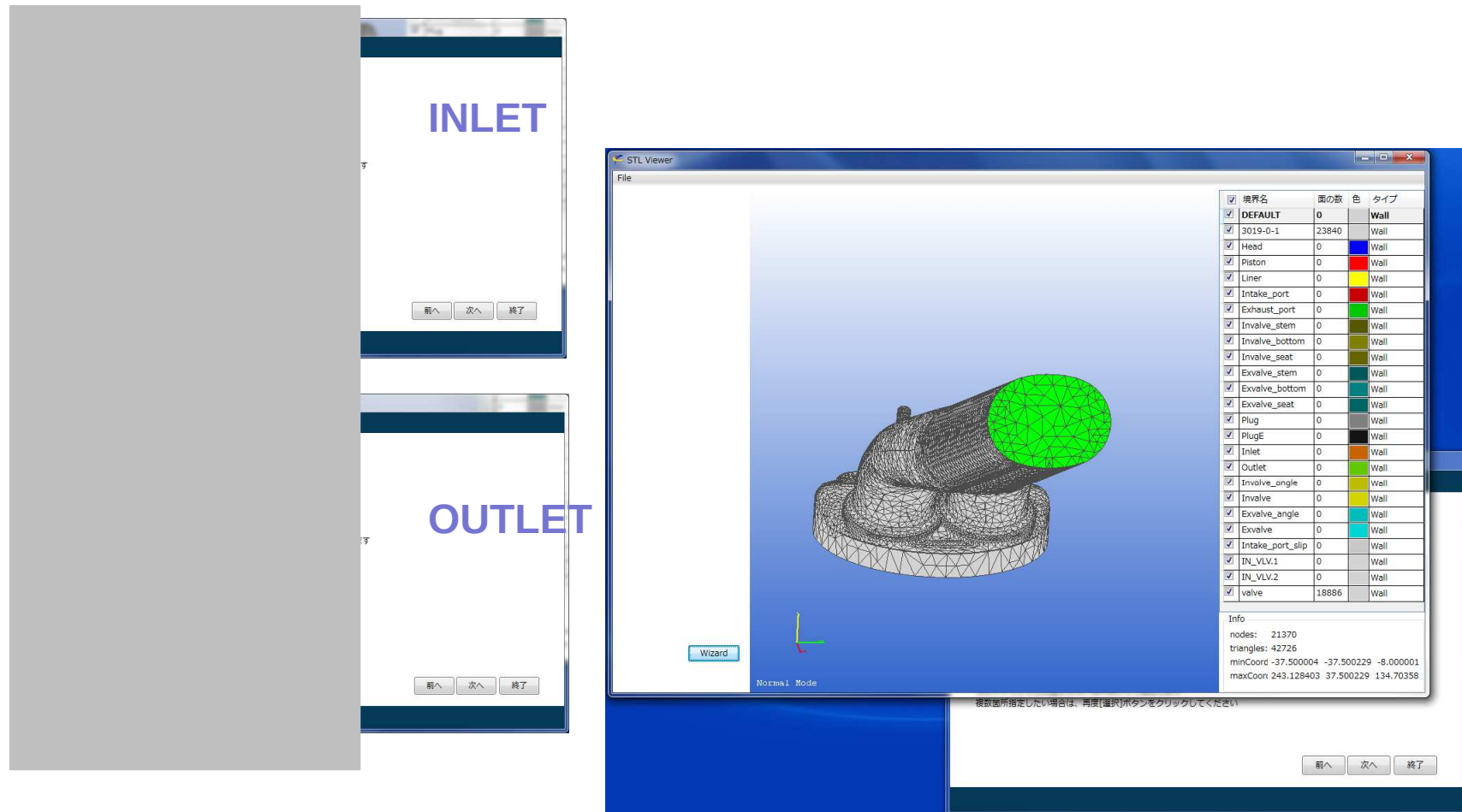
前処理

2. VALVE 読込



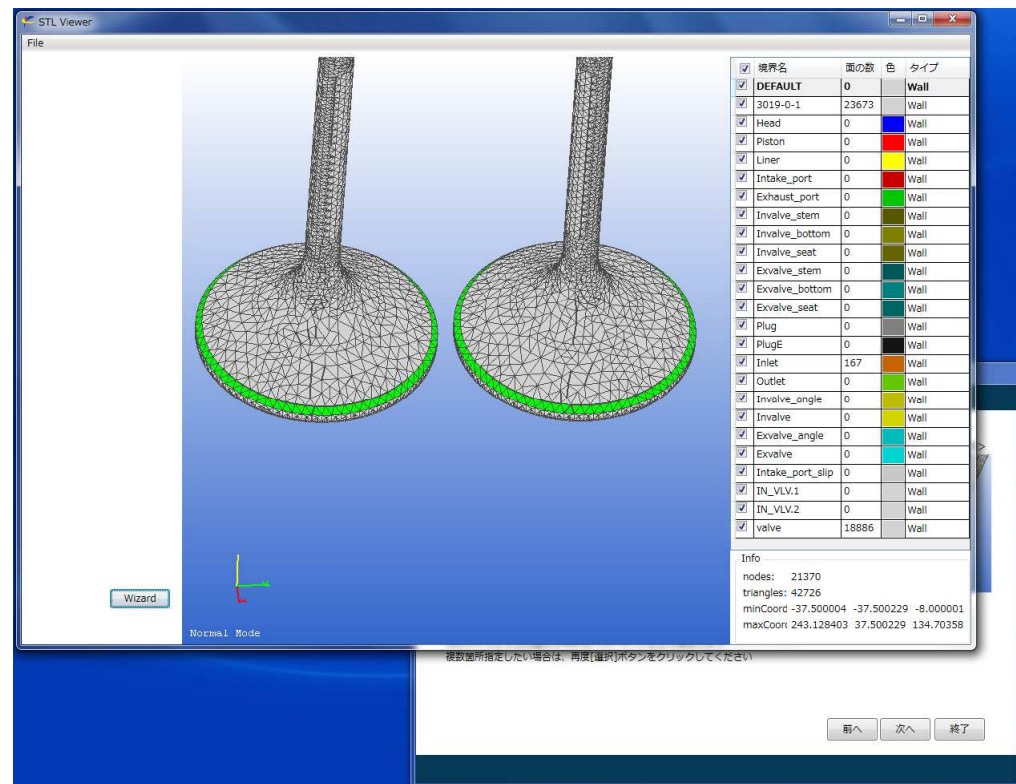
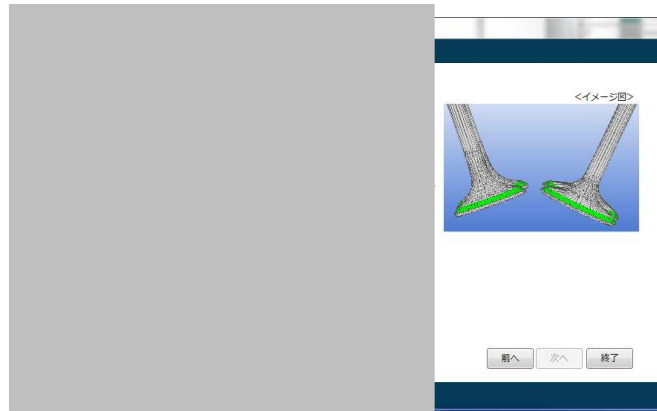
前処理

3. Select BOUNDARY Surface



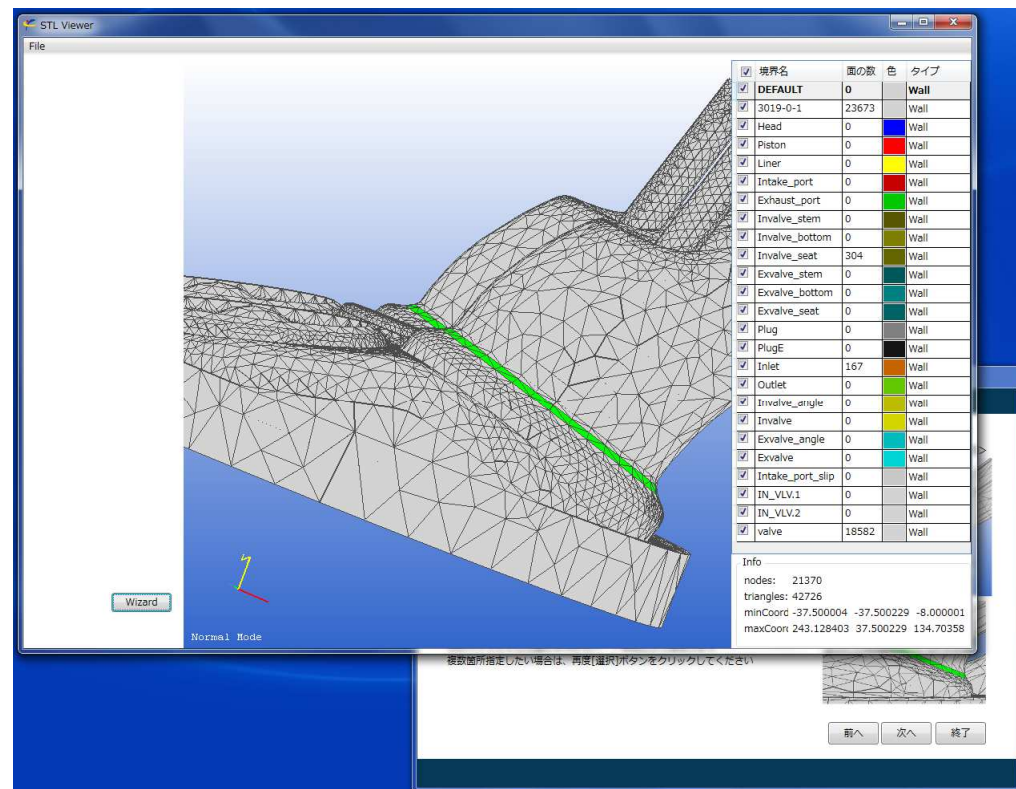
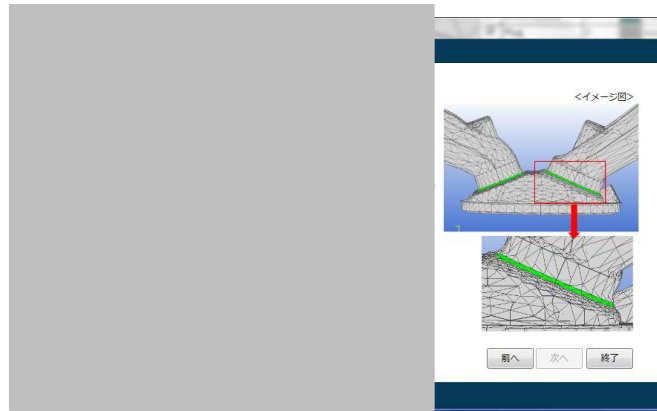
前処理

4. Select VALVE SHEETS



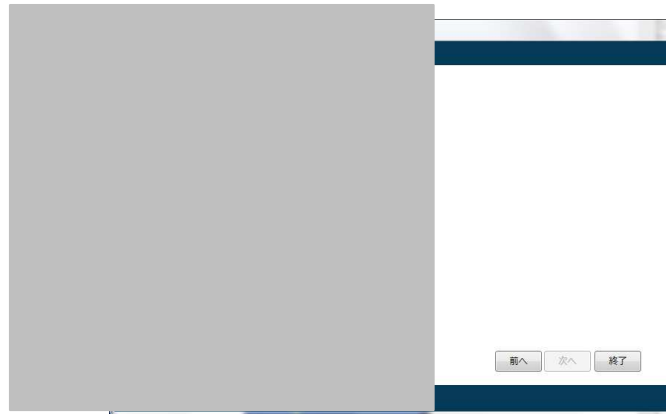
前処理

5. Select PORT Layers

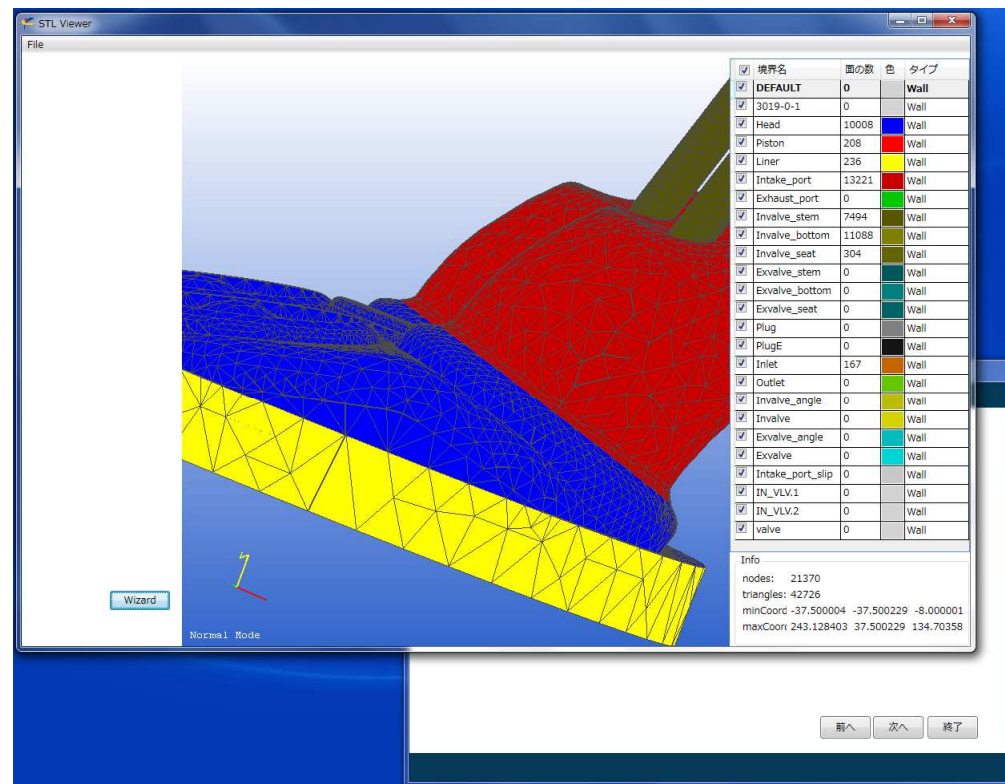


前処理

6. Set Bore value

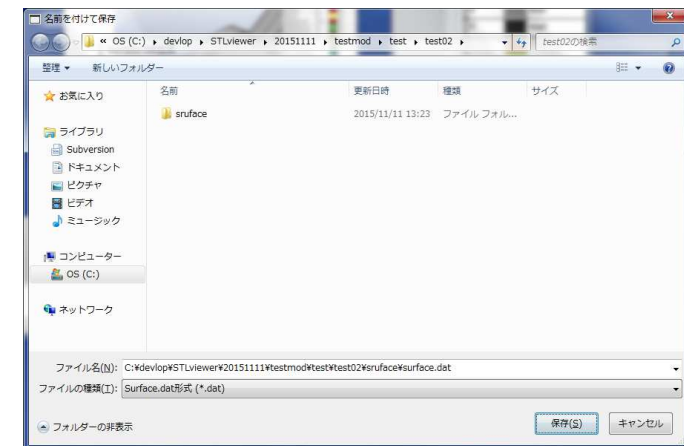
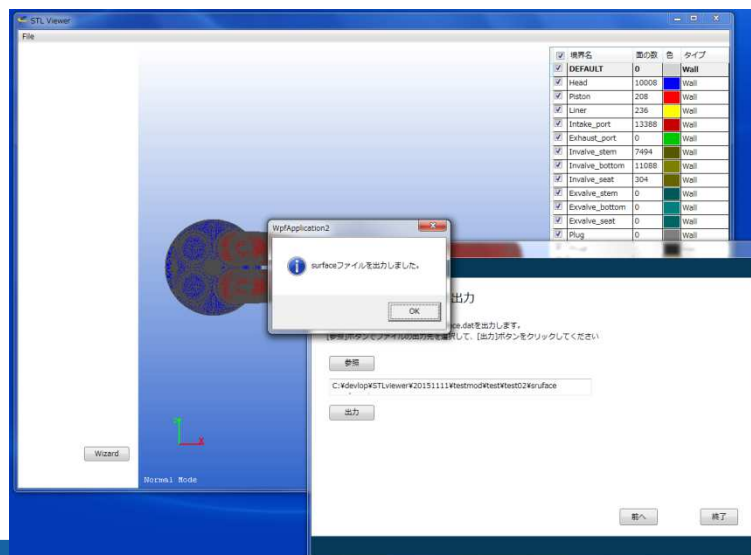
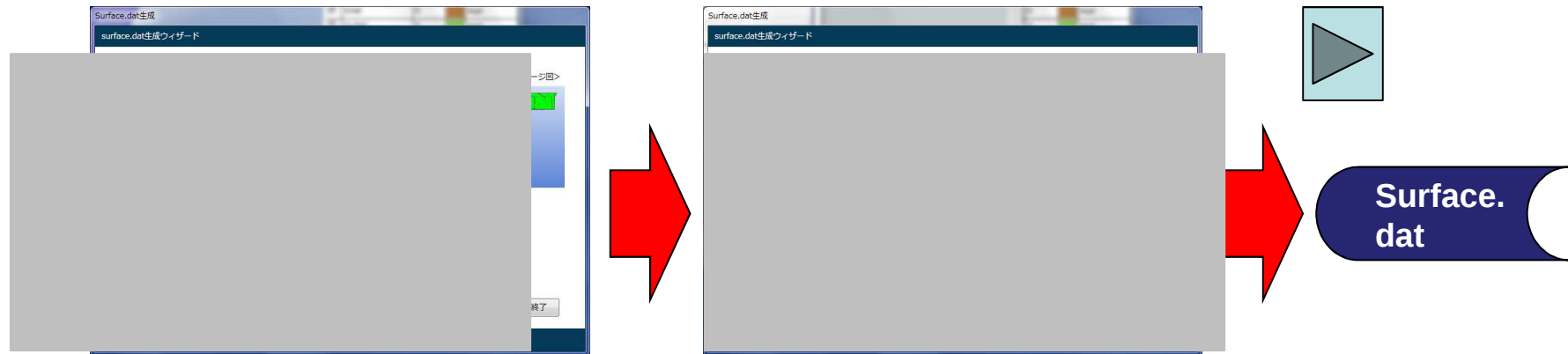


AUTO : Separate Surface boundaries



前処理

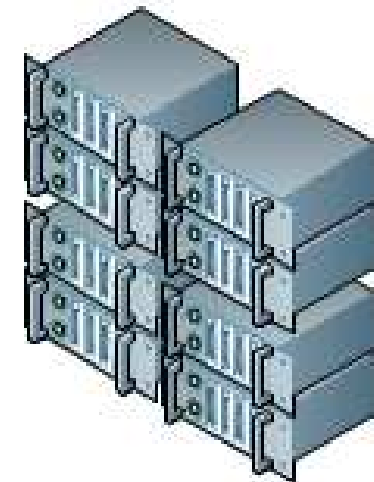
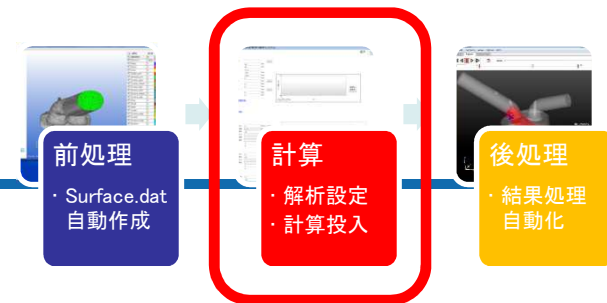
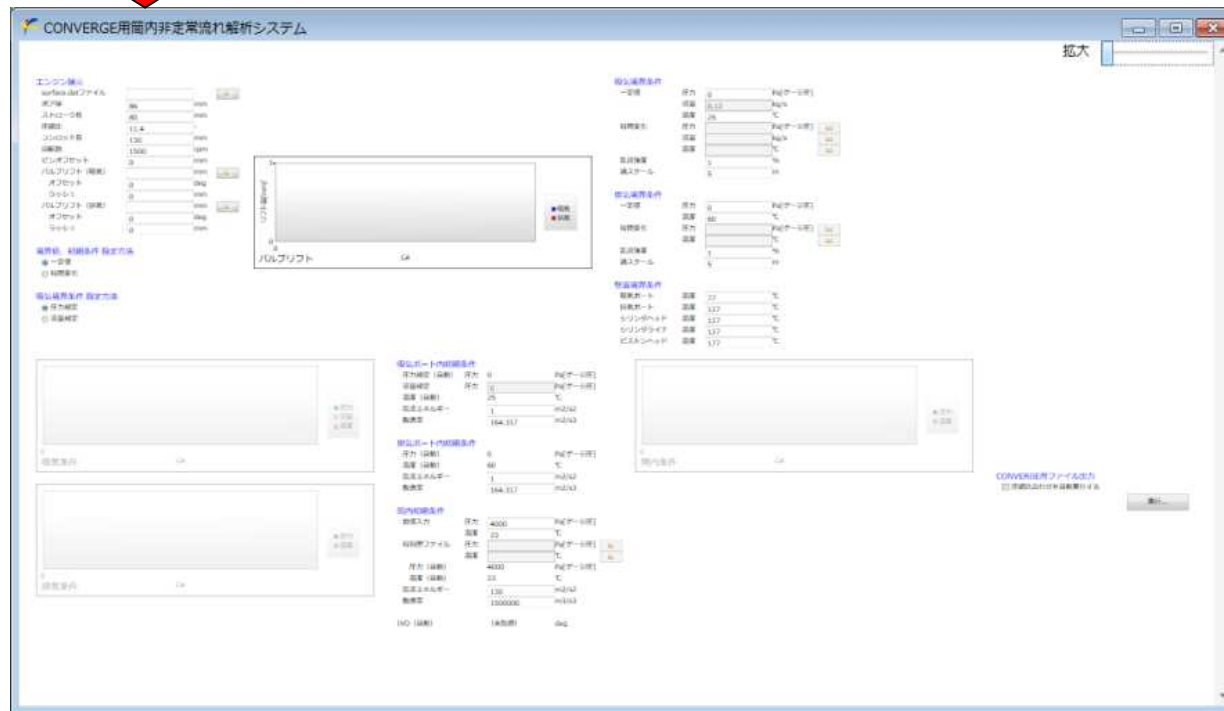
7. Plug setup, Write Surface.dat



計算実行

1. GUI

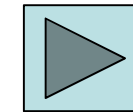
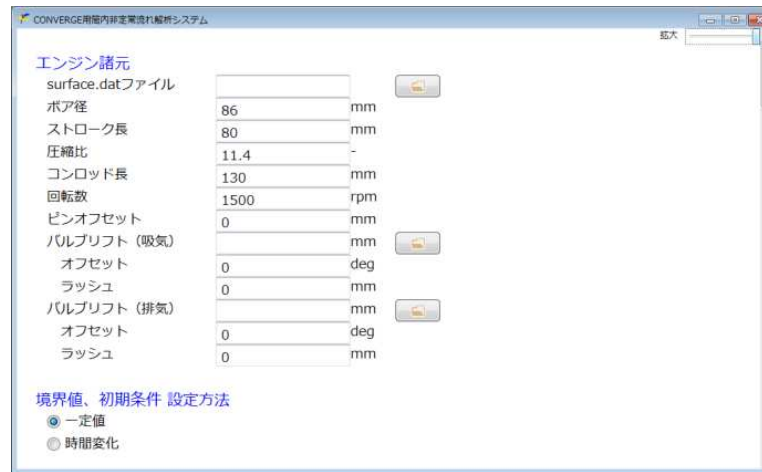
Surface.
dat



計算機

計算実行

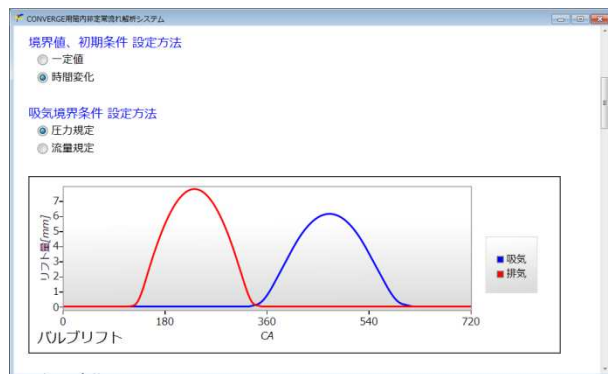
2. 機能



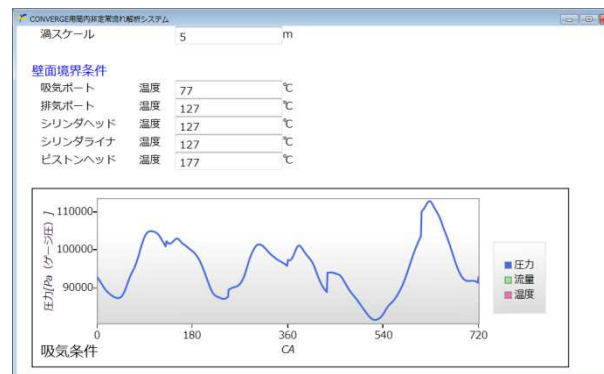
DEMO

From 境界条件、ValveLift
Automatic Set : Initial Condition

Surface.dat : Engine specific



Valve lift 読込、可Offset



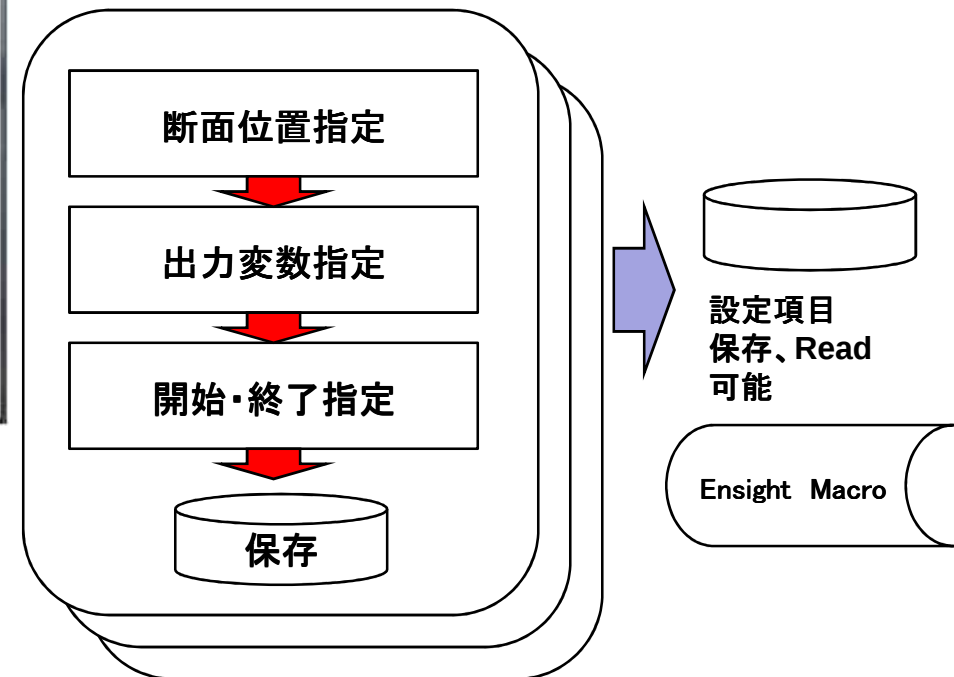
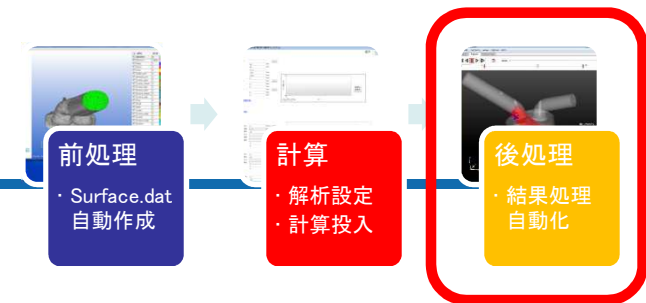
境界条件読込



解析実行

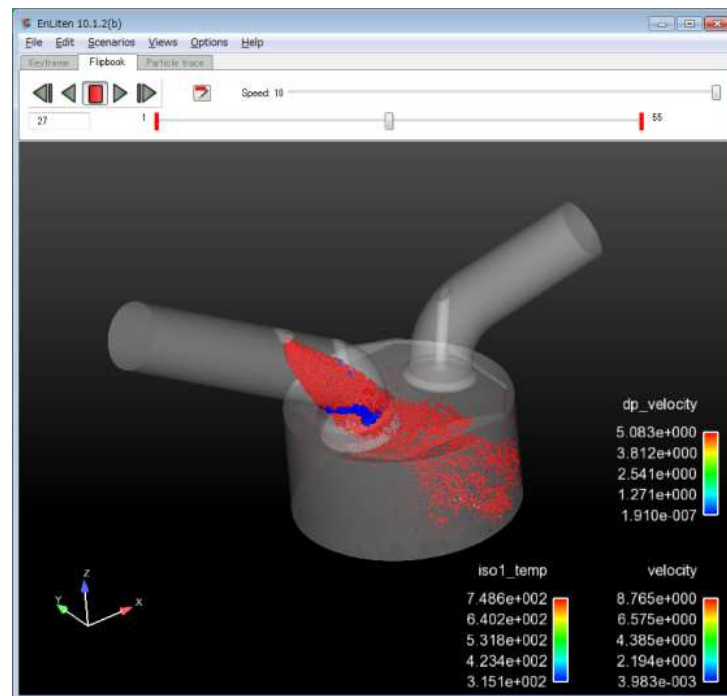
後処理

1. 概要

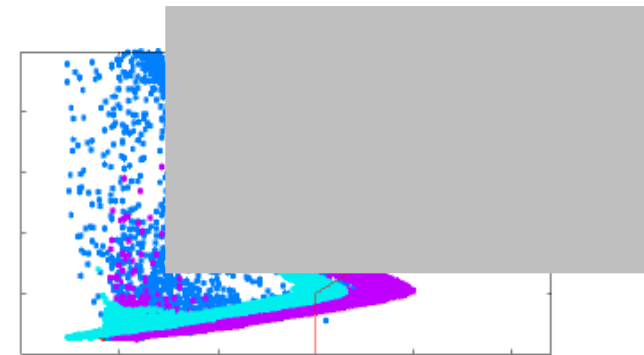


後処理

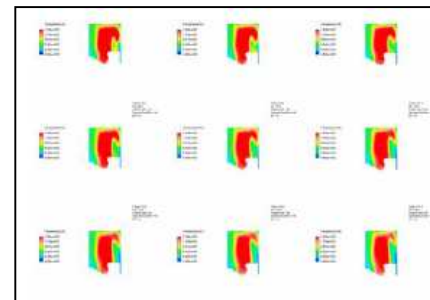
2. 出力図



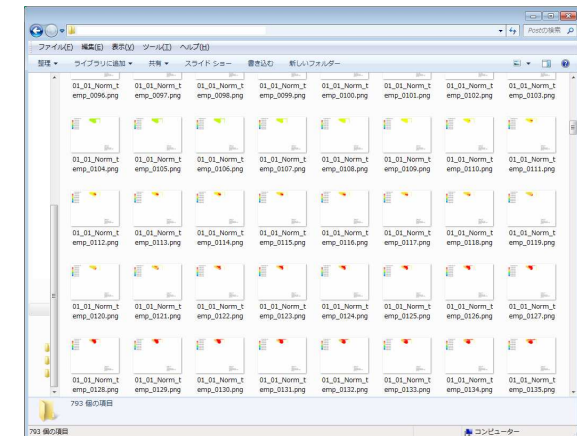
Enliten Files



Φ-T Map



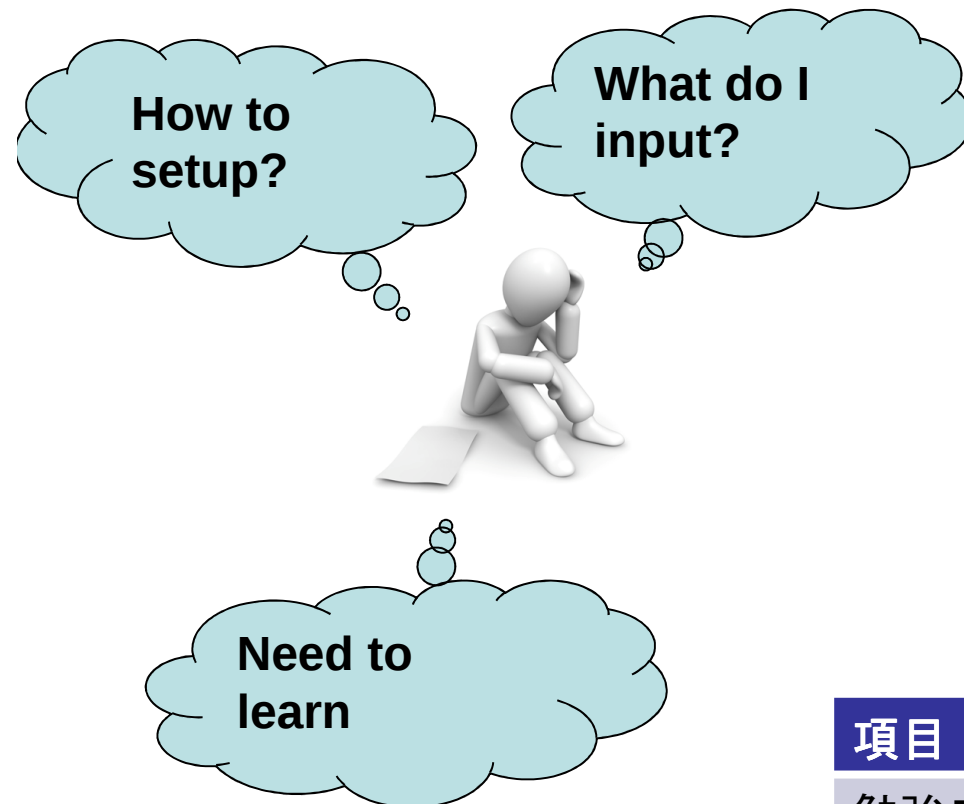
Report



Figure

効果

1. 簡単操作



Easy understand

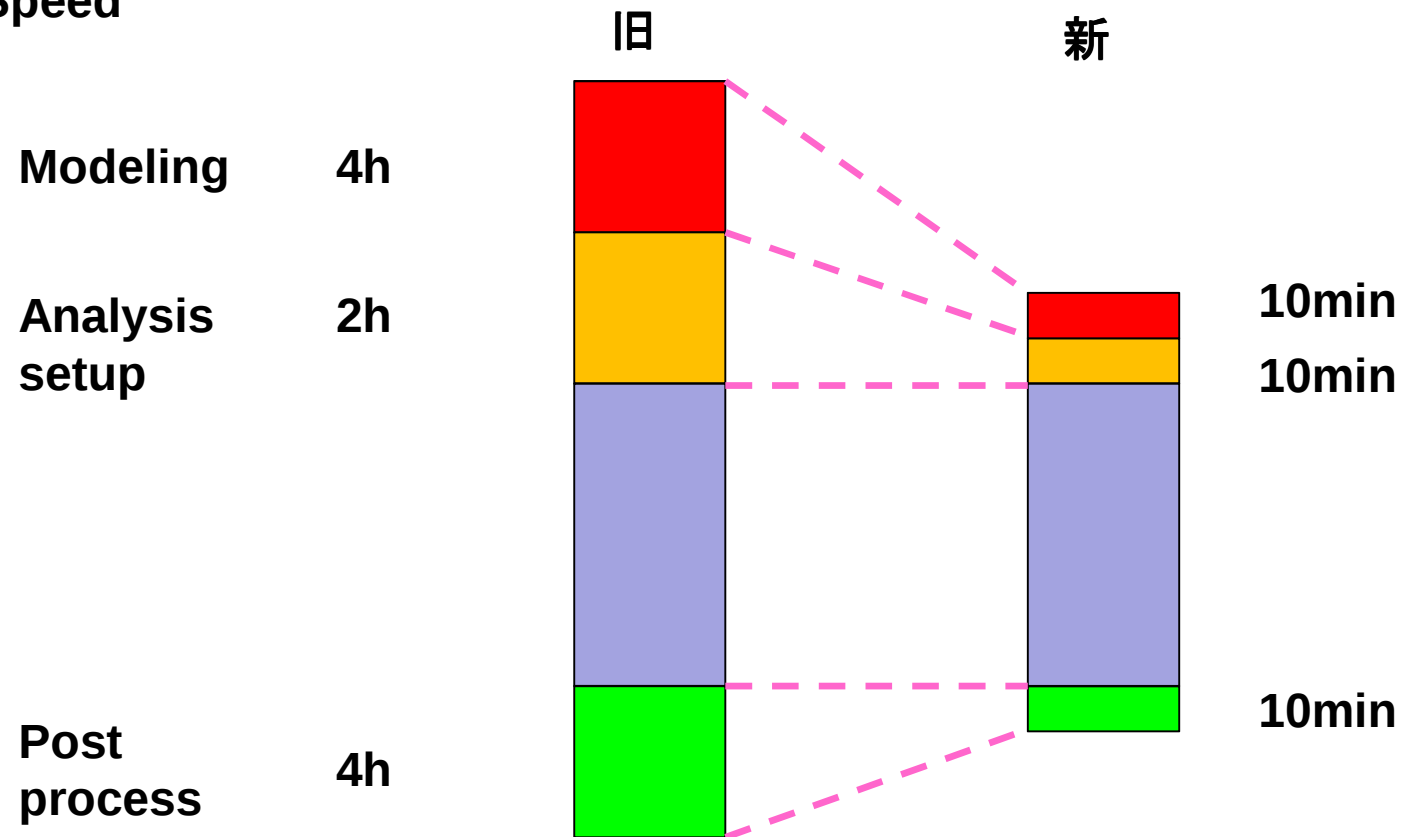
工数削減



項目	システム化前	システム化後
勉強工数	1-3 month	10min

効果

2. Speed



謝謝大家