



AUTODESK MOLDFLOW 2016

What's new!

Installation and User Interface

이원기 대리

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Distribution & Installation

Name Change

2015 Name	New 2016 Name
Autodesk® Simulation DFM	Autodesk® Moldflow® Design
Autodesk® Simulation Moldflow® Adviser Standard	Autodesk® Moldflow® Adviser Standard
Autodesk® Simulation Moldflow® Adviser Premium	Autodesk® Moldflow® Adviser Premium
Autodesk® Simulation Moldflow® Adviser Ultimate	Autodesk® Moldflow® Adviser Ultimate
Autodesk® Simulation Moldflow® Synergy	Autodesk® Moldflow® Synergy
Autodesk® Simulation Moldflow® Insight Standard	Autodesk® Moldflow® Insight Standard
Autodesk® Simulation Moldflow® Insight Premium	Autodesk® Moldflow® Insight Premium
Autodesk® Simulation Moldflow® Insight Ultimate	Autodesk® Moldflow® Insight Ultimate
Autodesk® Simulation Moldflow® Insight 360	Autodesk® Moldflow® Flex

Distribution changes

- Windows 설치:

- SIM Studio 자동설치
- Vault Client는 설치 안됨 (별도 다운로드 필요)
- Synergy & Communicator 한글 지원
- Flex 설치시 communicator 자동설치

- Linux 설치:

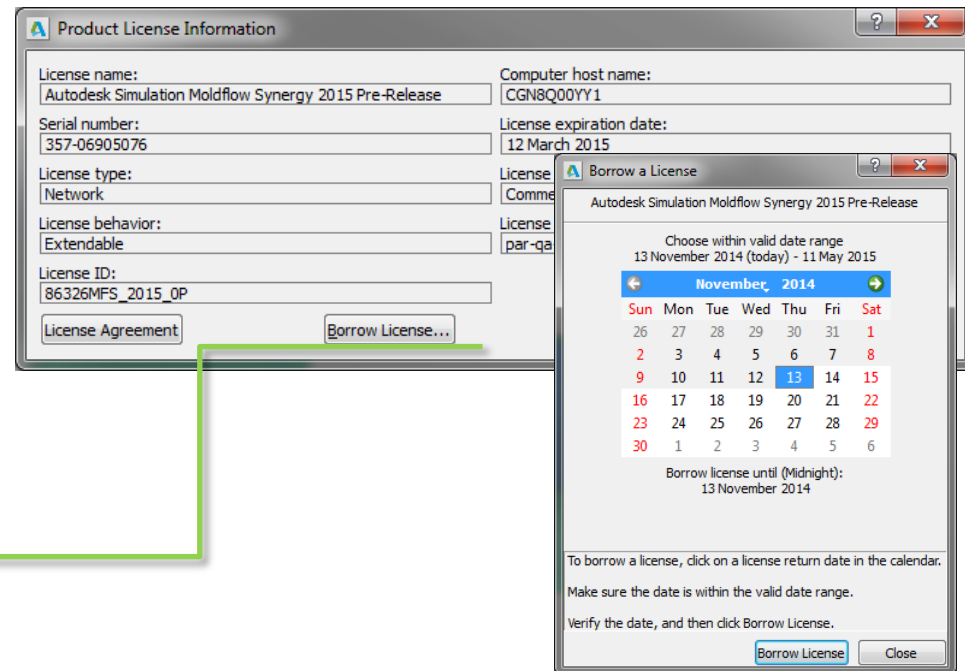
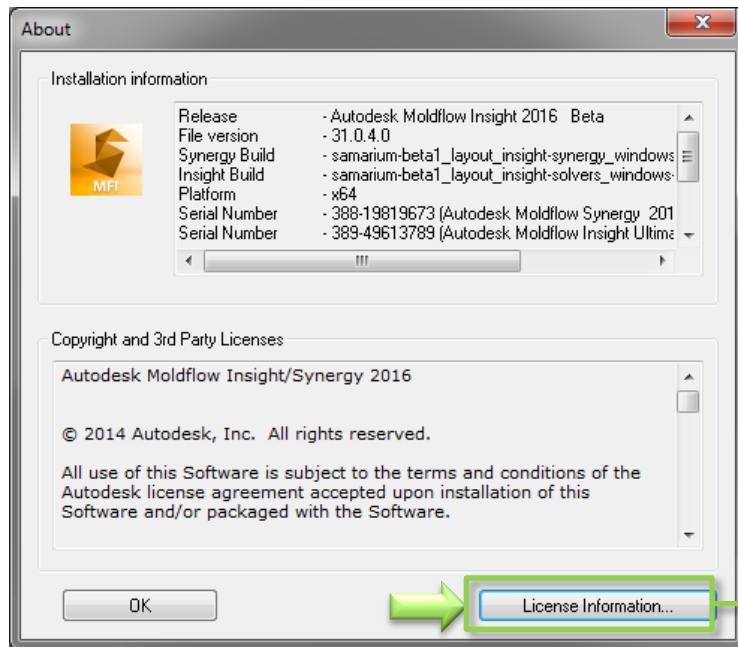
- Part of DVD /Insight windows download/Insight Linux download
 - ✓ Thin and workstation install
 - ✓ Only 1 installer for all Linux version

Update of License manager

- Network License manager(LMTOOLS) 업데이트 필요 (v11.12.14)
 - V11.12버전 대비 버그수정 외 변경사항 없음
- Uninstall 필요« Autodesk network License manager » 제어판에서 삭제 해야함
 - 64 bit version 설치(제품 설치 화면내 «tools and utilities»)

Borrow a License

- 가능제품 : Synergy, Adviser or CAD Doctor License
- Help-About (Autodesk standard)에서 확인
- License에 관한 정보 확인



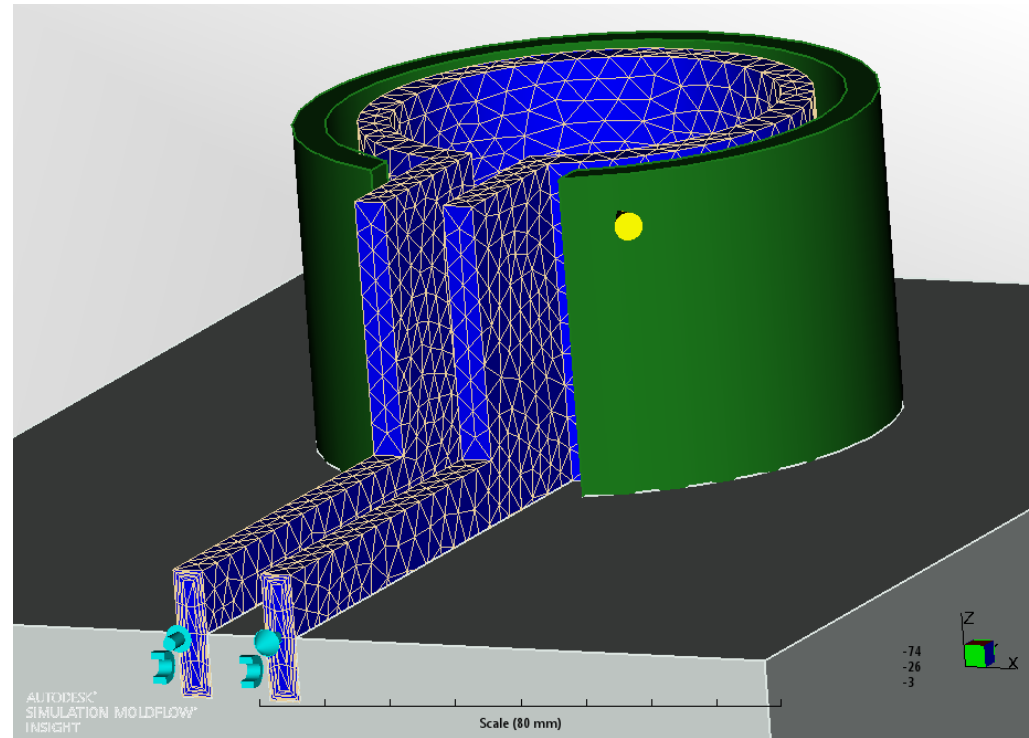
Insight License changes

■ 설치가이드 참고

		Insight Standard Insight Premium Insight Ultimate New Capability		
	License Capacity	Moldflow Insight 2015	License Capacity	Moldflow Insight 2016
Moldflow Synergy (GUI)				CAD Warpage Export
Moldflow Insight Standard	3X	Fill/Pack DOE Overmolding	1X	Fill/Pack Overmolding Basic Cool (FEM & BEM) Fiber Warp Cluster license tracking Movable Valve Pins
Moldflow Insight Premium	3X	Basic Cool (FEM & BEM) Fiber Warp Conformal Cooling * Rapid Heating and Cooling Wire Sweep and Core shift	3X	DOE Conformal Cooling Rapid Heating and Cooling Wire Sweep and Core shift Induction heating (RocTool)
Moldflow Insight Ultimate	3X	Special Injection Processes (Gas, Compression, etc.)	3X	Special Injection Processes (Gas, Compression, etc.) Solver API

Integrate CFD Mesher+solver for Conformal Cooling

- CFD licenses 불필요(Moldflow Premium0이상)
- CFD Software 설치 불필요
- 빠른 Mesh 생성



Improved cleanreg

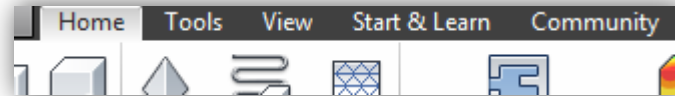
- Cleanreg기능을 사용하여 문제가 되는 reg 를 청소 할 수 있음
- Adviser: advcleanreg.exe
- Synergy: synergycleanreg.exe
- Insight: insightcleanreg.exe
- Flex: amiwscleanreg.exe

User interface and workflow enhancements

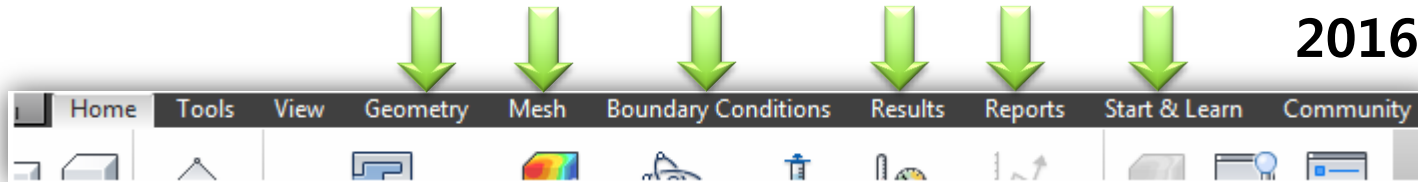
Enhancements to Ribbon Menu (Insight and Advisor)

- 자동으로 Tab 활성화

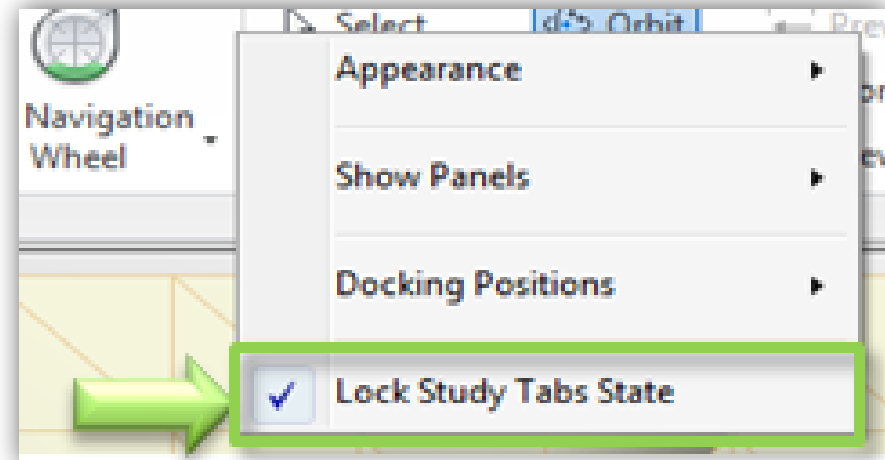
2015



2016

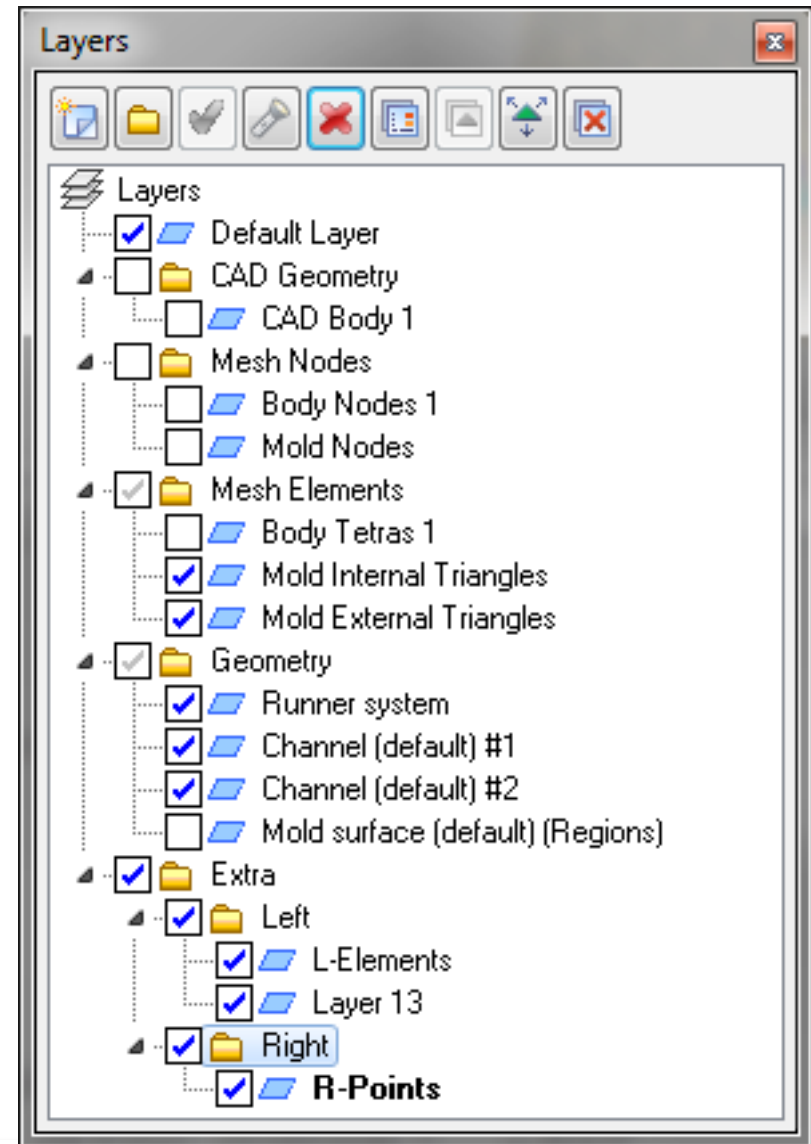


- 모든 Study에 대해 동기화
 - Study간 전환시 동일 Tap 적용



New Layer management

- Tree구조로 Layer 배치



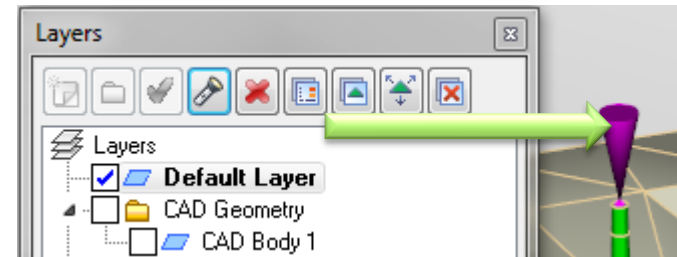
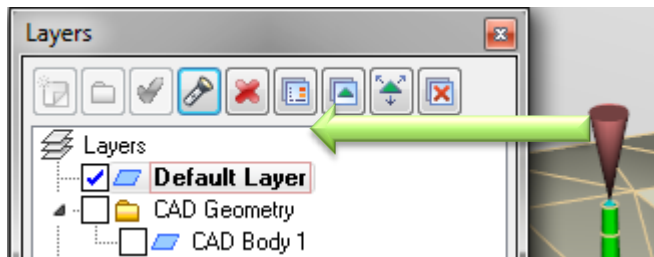
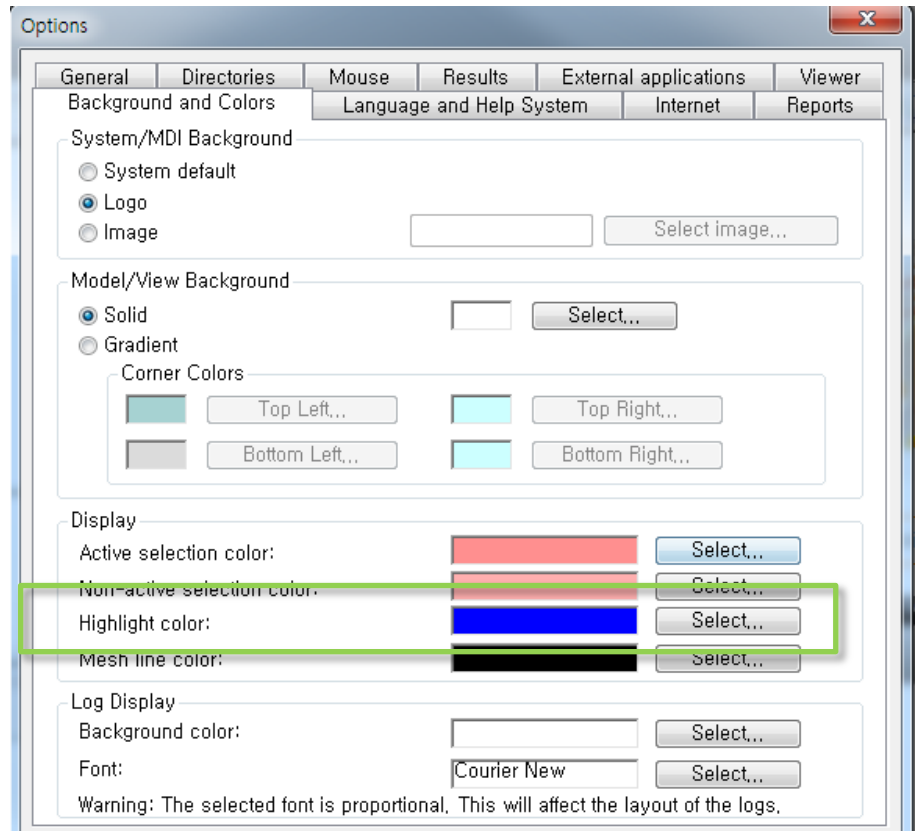
Highlight Layer

- Highlight Layer

- 기본 색상: Dark Blue

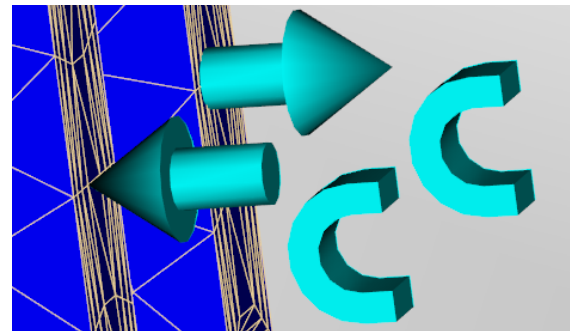
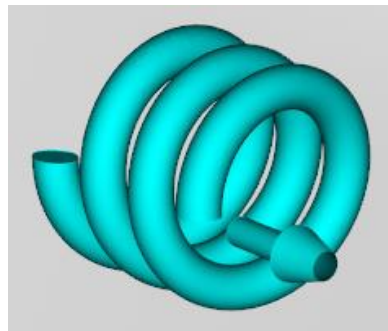
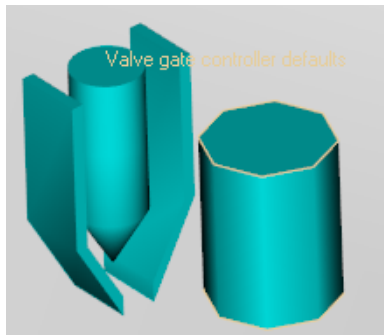
- Highlight 색상 변경 가능

- 양방향 : Layers 선택 또는 Element 선택



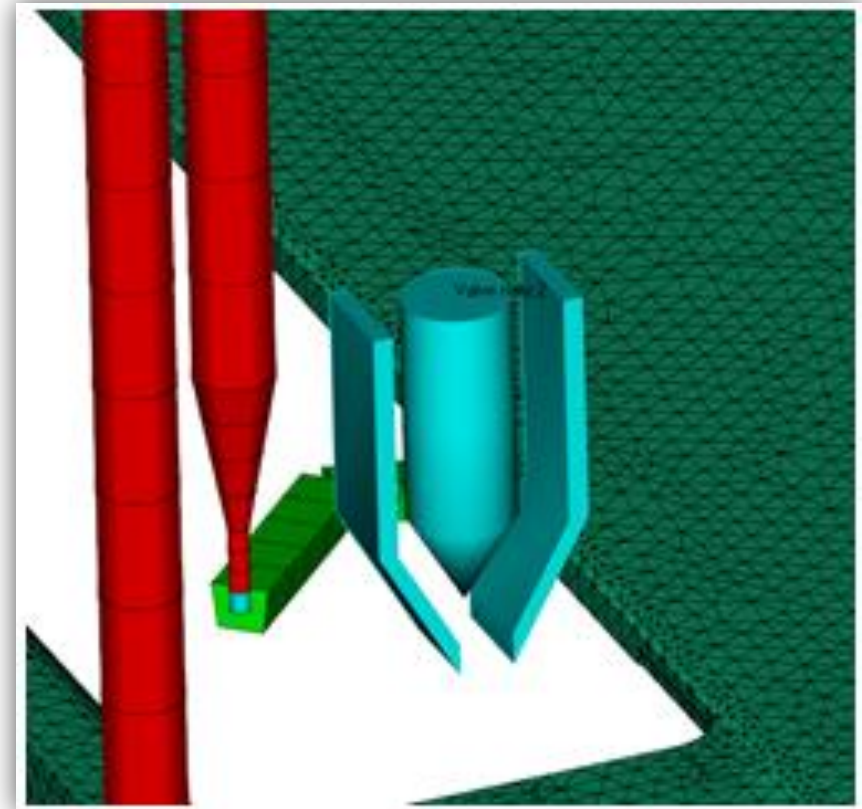
Indicators

- Boundary Conditions에 대한 기호 추가
 - Valve gates
 - Induction coil
 - Cooling inlets/outlets
 - Cooling outlets의 경우 Conformal Cooling시 가능



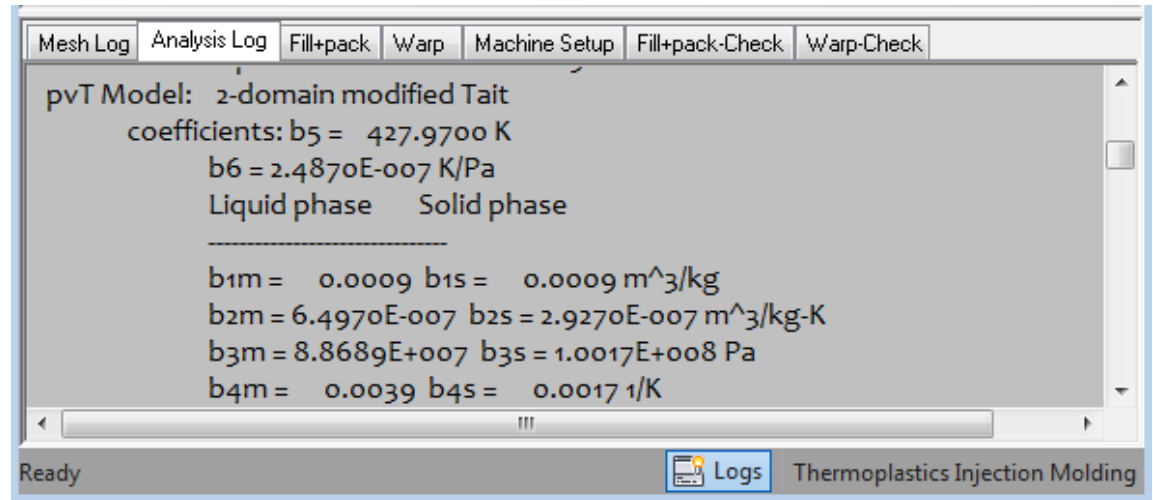
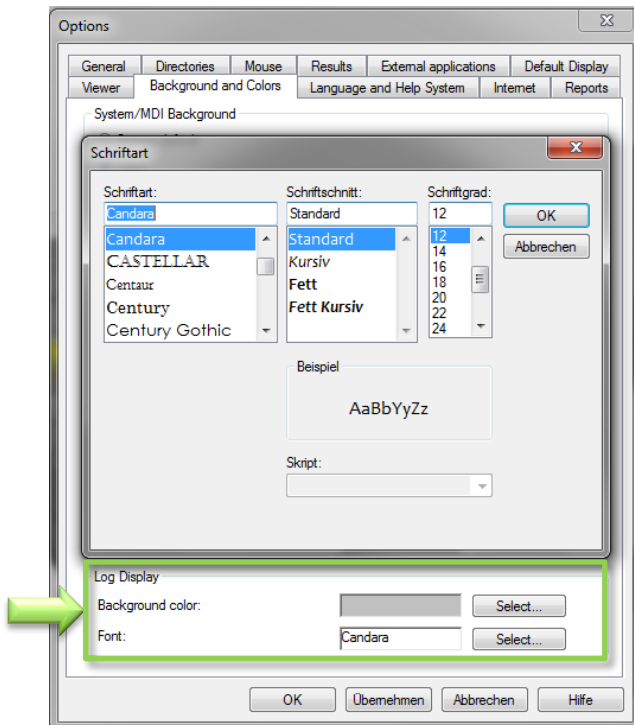
New glyphs to identify valve gate locations

- Valve gate 주변에 위치
 - Valve gate 이름 표시됨
- Valve gate 선택을 위해 사용



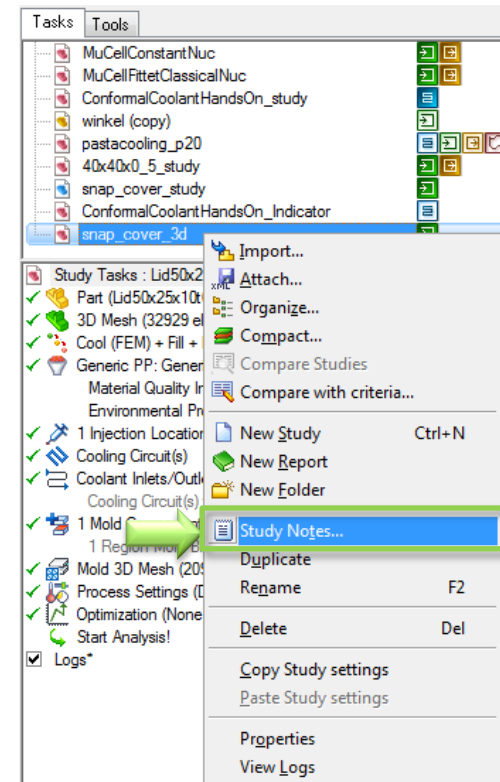
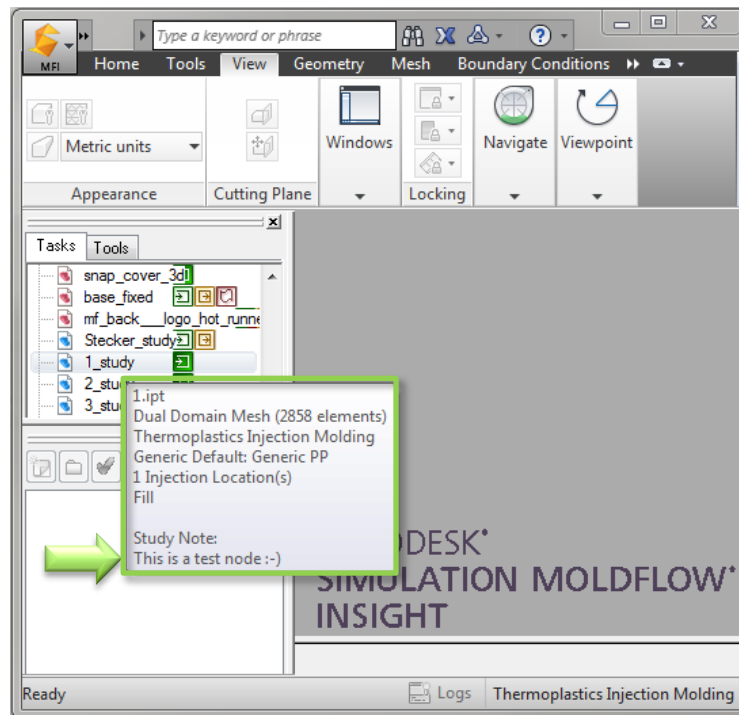
Color settings (Insight and Communicator)

- 색상 및 폰트 선택 가능



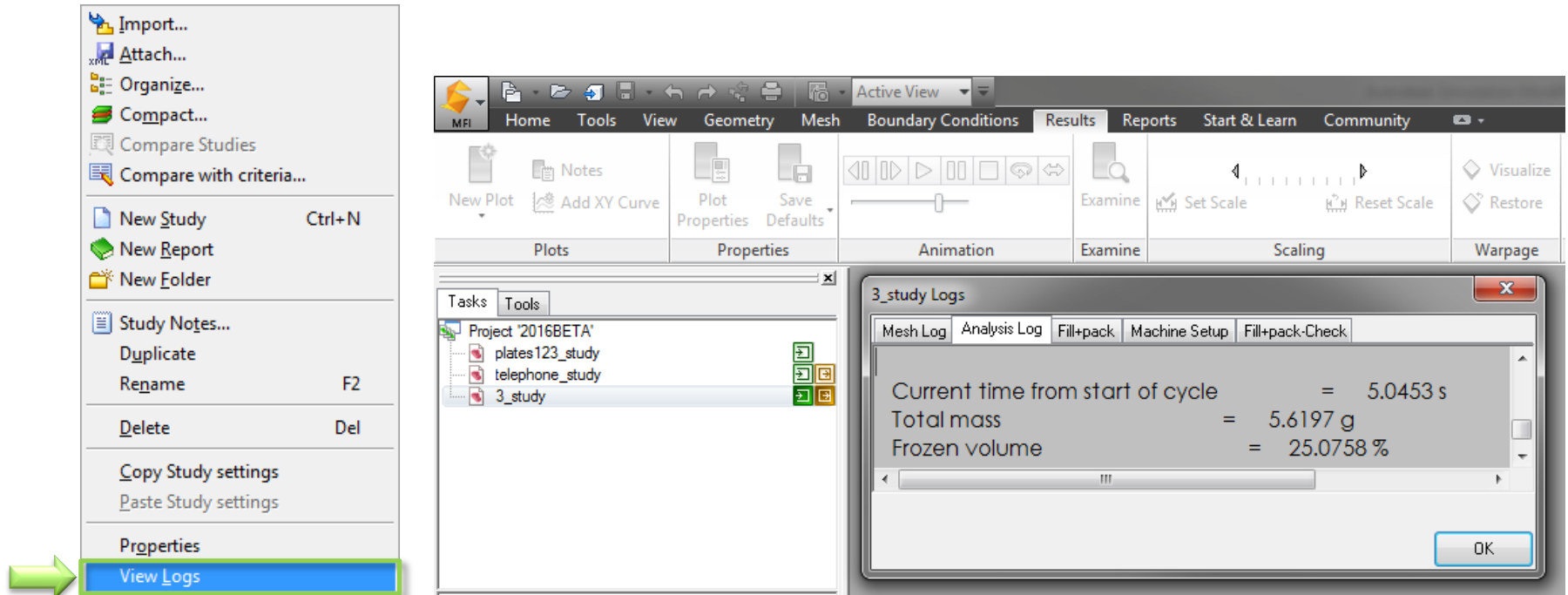
Access Study Notes (Insight and Advisor)

- Study를 열지 않고 Study Note 확인 가능



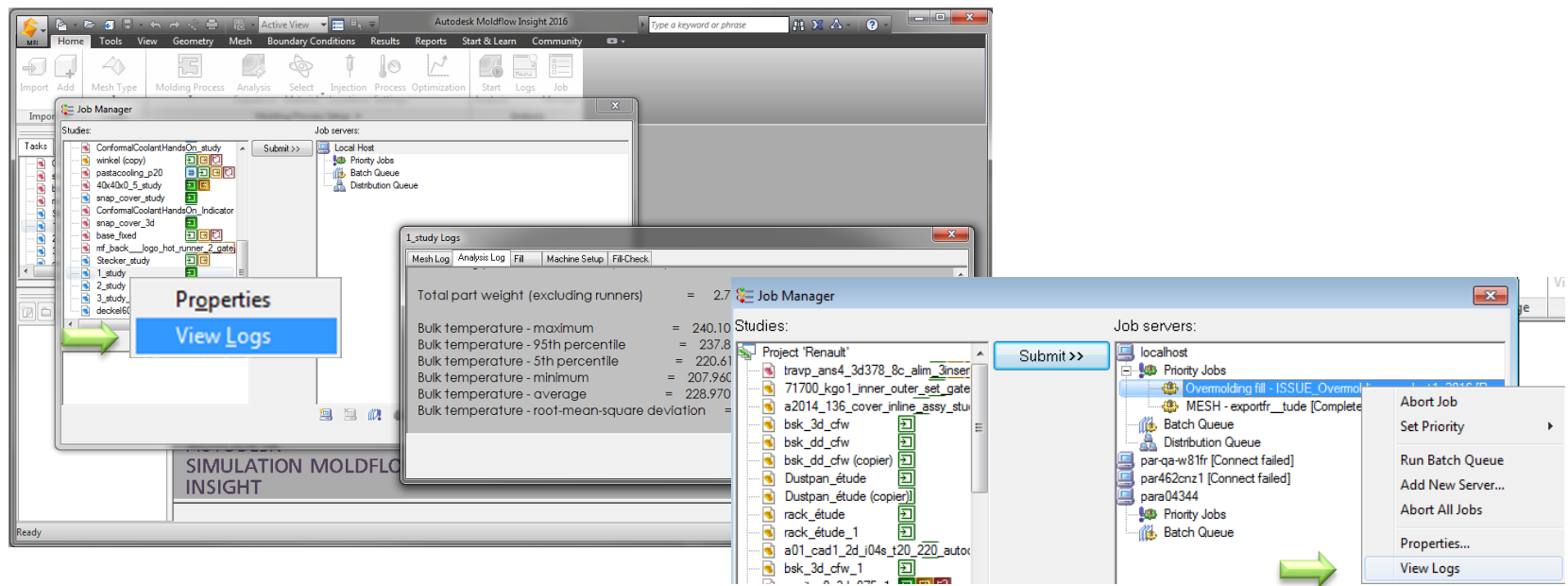
Access Logs Possibility 1 of 2

- Study를 열지 않고 Log File 확인 가능
- Study Task를 통해 확인



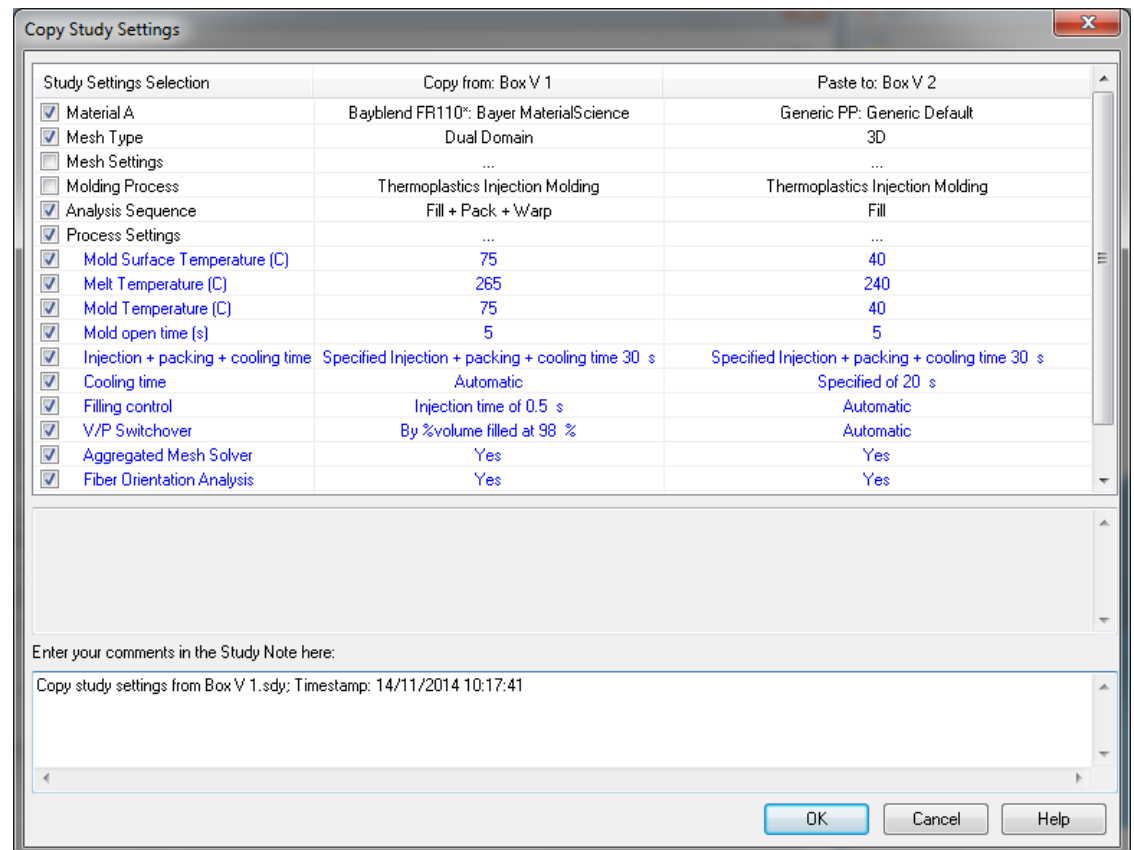
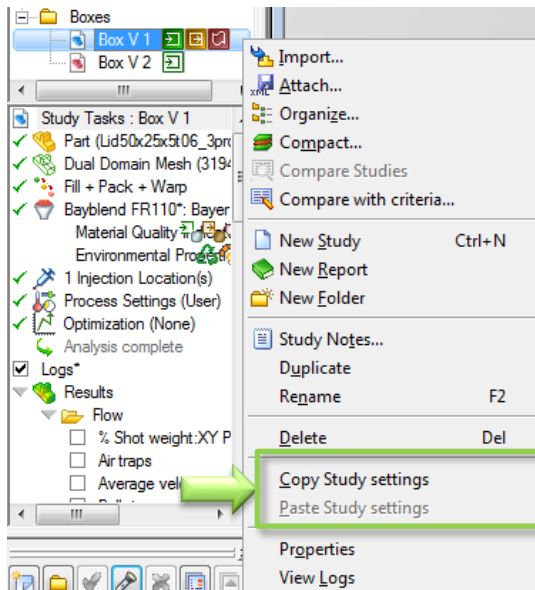
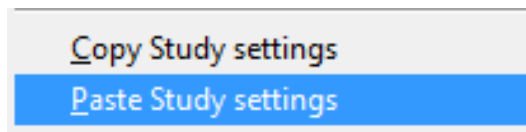
Access Logs Possibility 2 of 2

- Job Manager를 통해 확인
 - Running or non-running studies
- 활성화 중인 현재 Project에서만 가능



Copy Study Settings

- Copy & Paste 옵션 사용

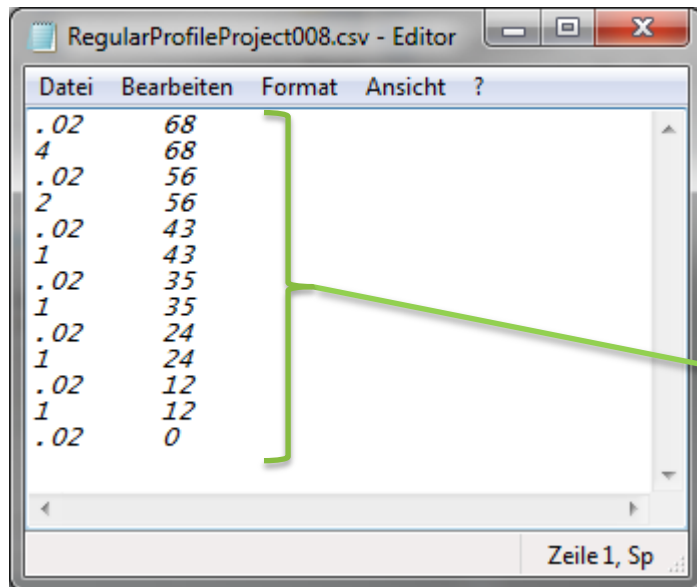


Copy study settings

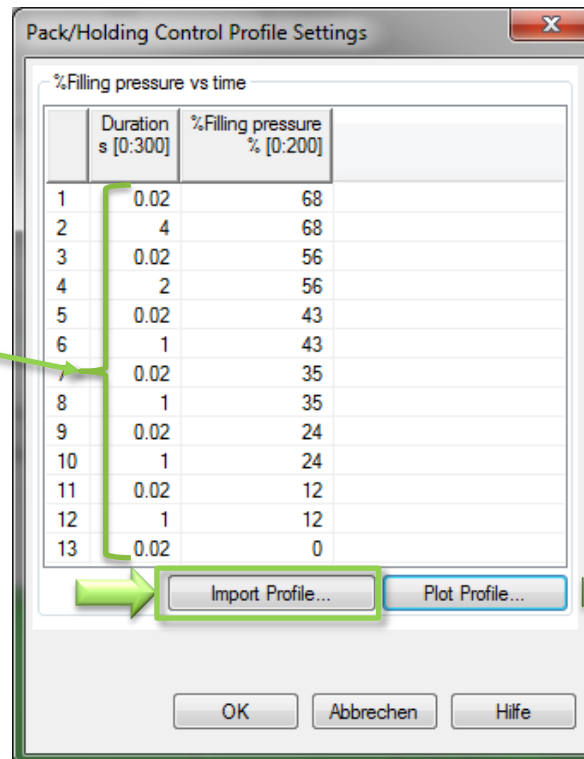
- Material
- Mesh type
- Mesh parameters
- Process
- Sequence
- Process settings
 - 개별 Parameters는 적용 안됨
- Undo 안됨
- Study Note 추가 가능

Import Profile

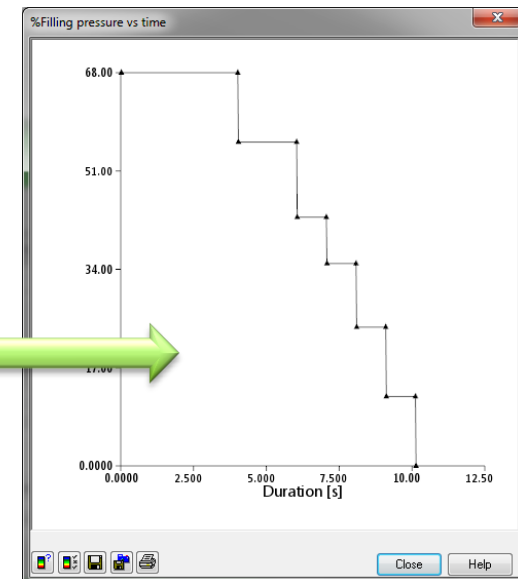
- File (*.csv) Import 가능
 - 표로 만들어진 포맷 사용



Duration	Filling pressure
0.02	68
4	68
0.02	56
2	56
0.02	43
1	43
0.02	35
1	35
0.02	24
1	24
0.02	12
1	12
0.02	0



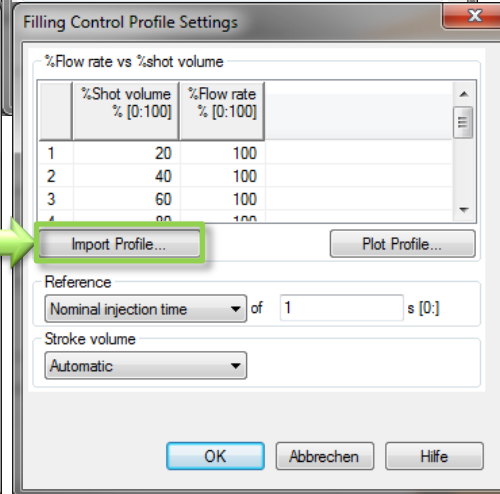
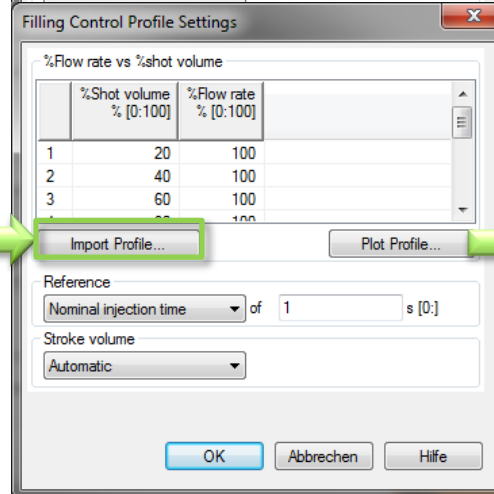
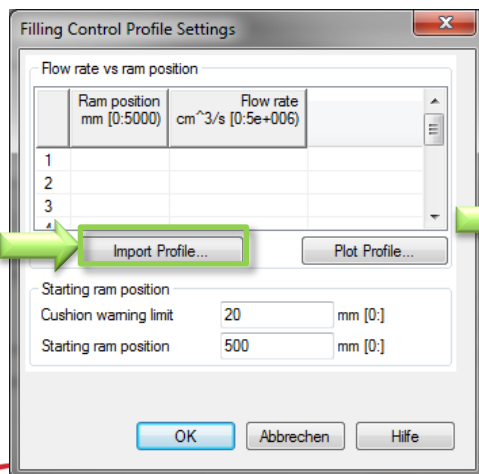
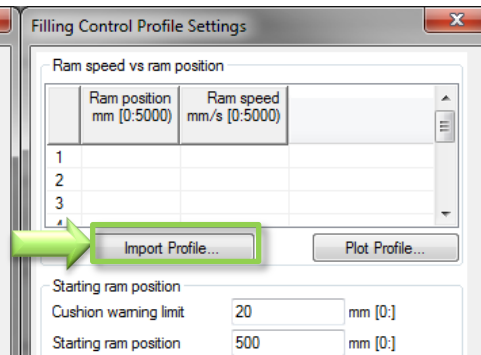
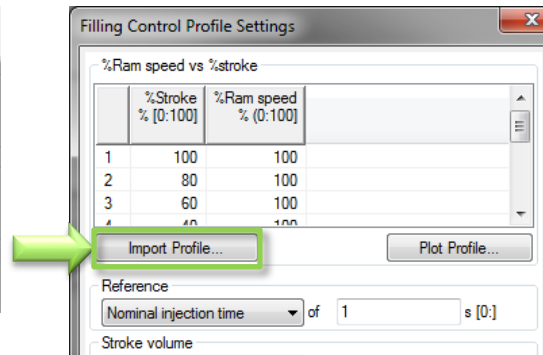
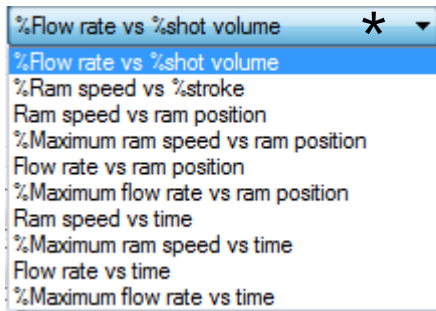
	Duration s [0:300]	%Filling pressure % [0:200]
1	0.02	68
2	4	68
3	0.02	56
4	2	56
5	0.02	43
6	1	43
7	0.02	35
8	1	35
9	0.02	24
10	1	24
11	0.02	12
12	1	12
13	0.02	0



Import Profile

- 모든 Injection Profile을 지원

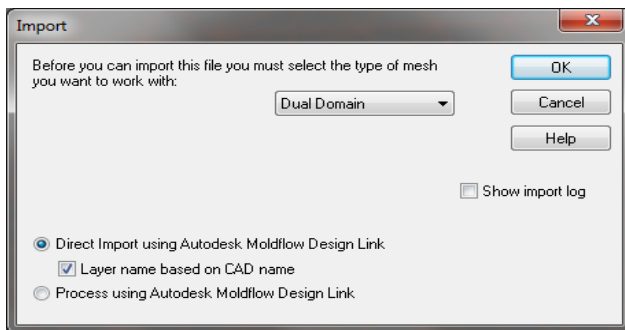
Relative ram speed profile *
Absolute ram speed profile
Legacy ram speed profiles (Obsolete)



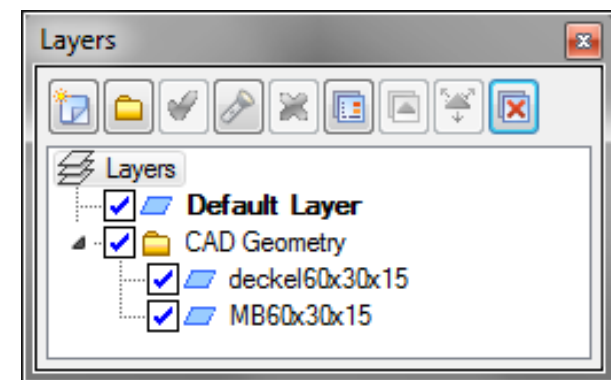
Import/Export

CAD file import enhancement

- CAD File Import 성능 강화:
 - Import 속도개선(평균 30% 증가)
 - 안정화됨
- CAD Name도 Import 됨

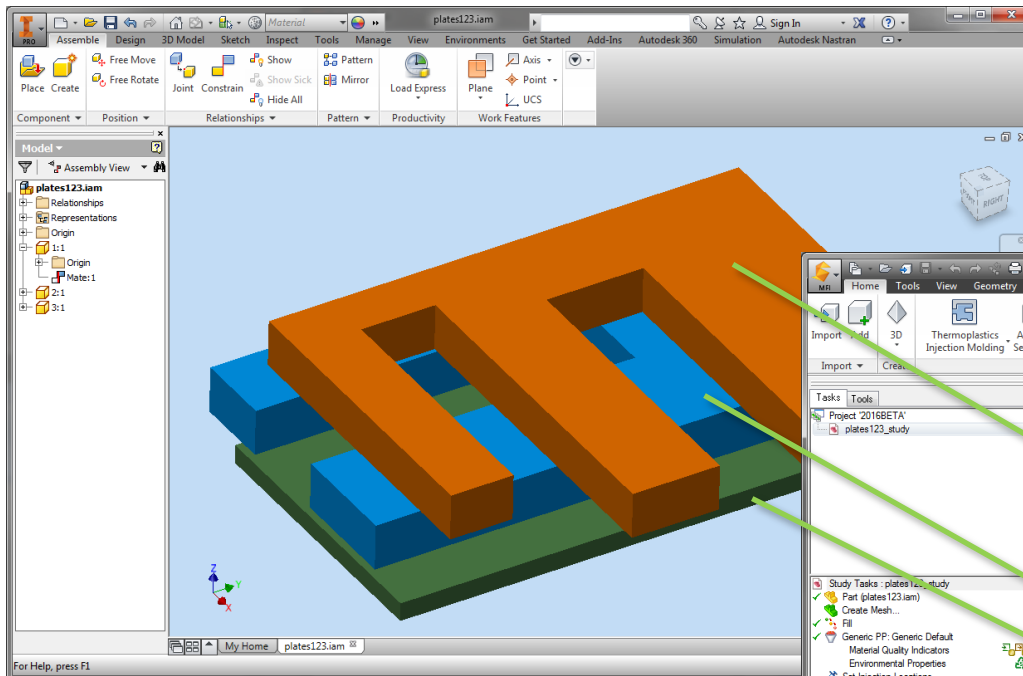


deckel60x30x15_MB.iam
MB60x30x15.ipt
deckel60x30x15.ipt



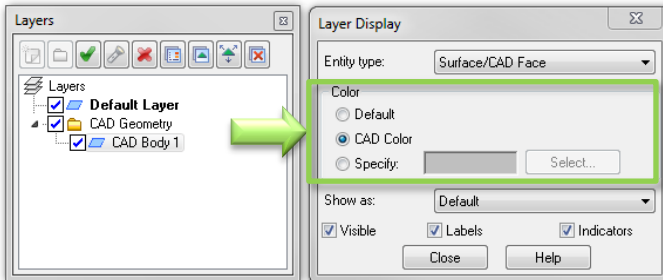
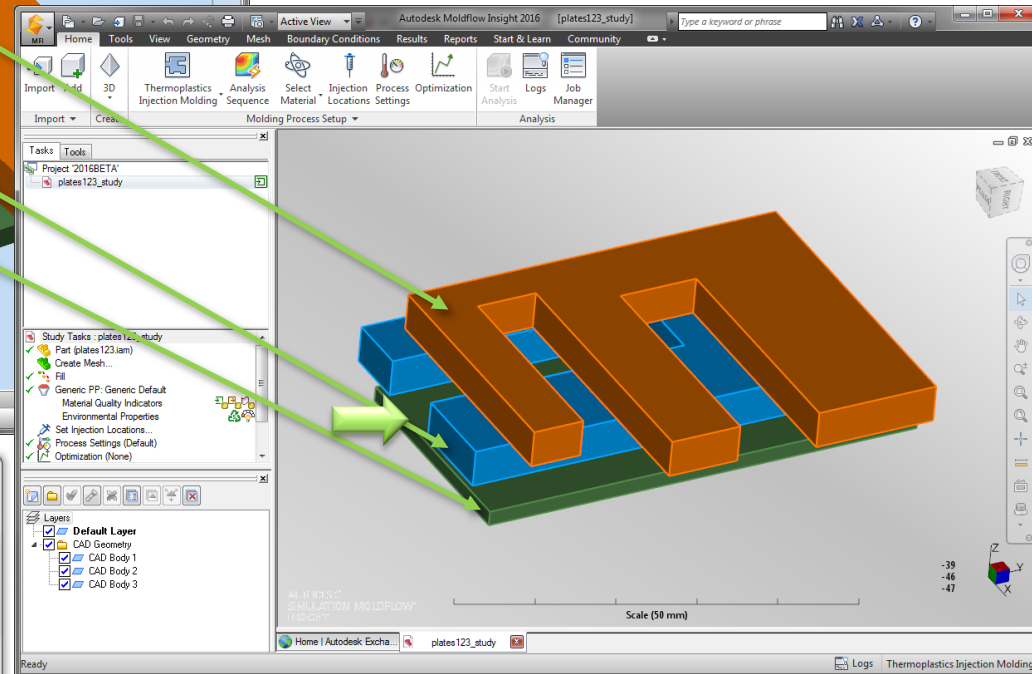
Import enhancements

- CAD와 Moldflow 모두 같은 Body 색상 사용



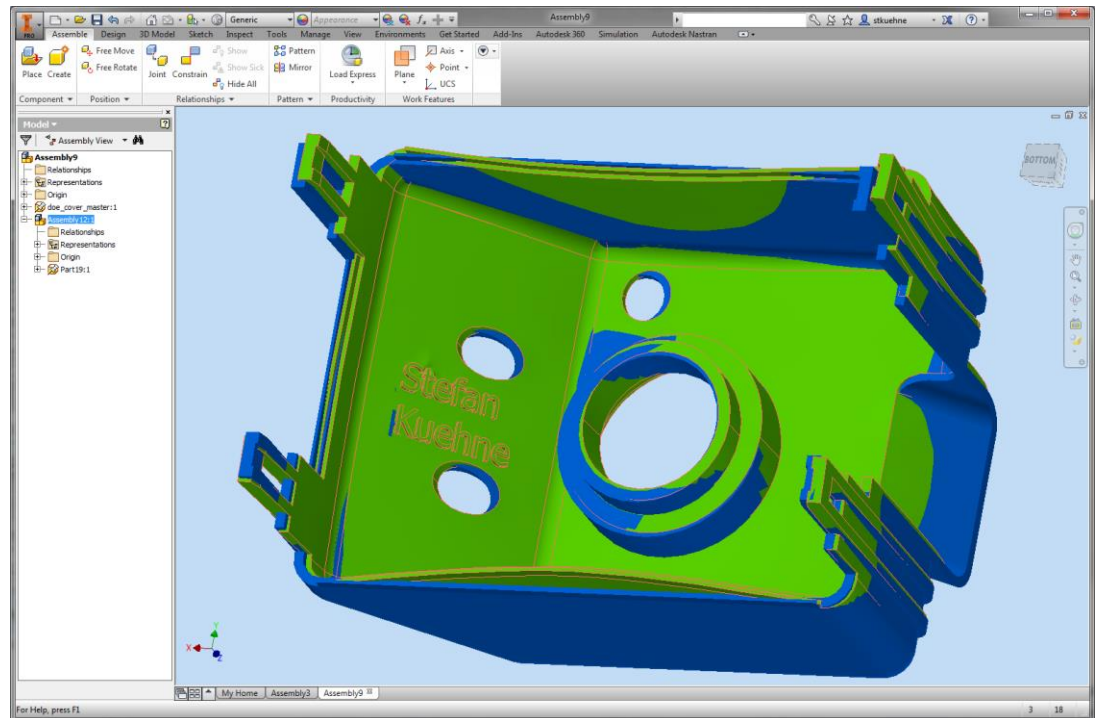
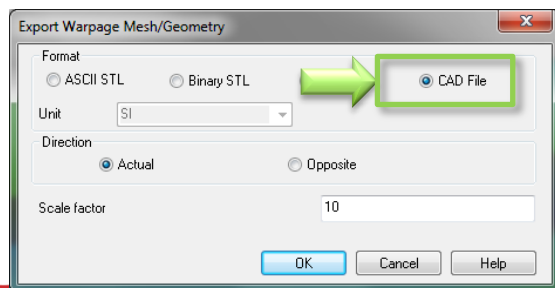
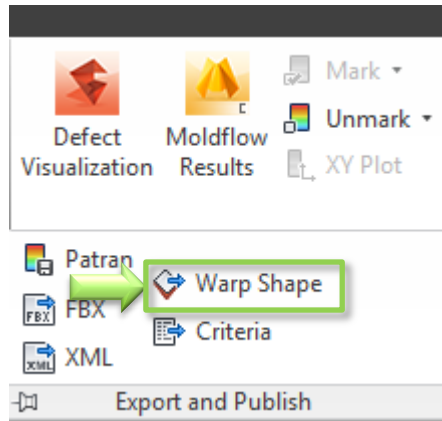
CAD

Moldflow



Exporting the warped mesh/geometry

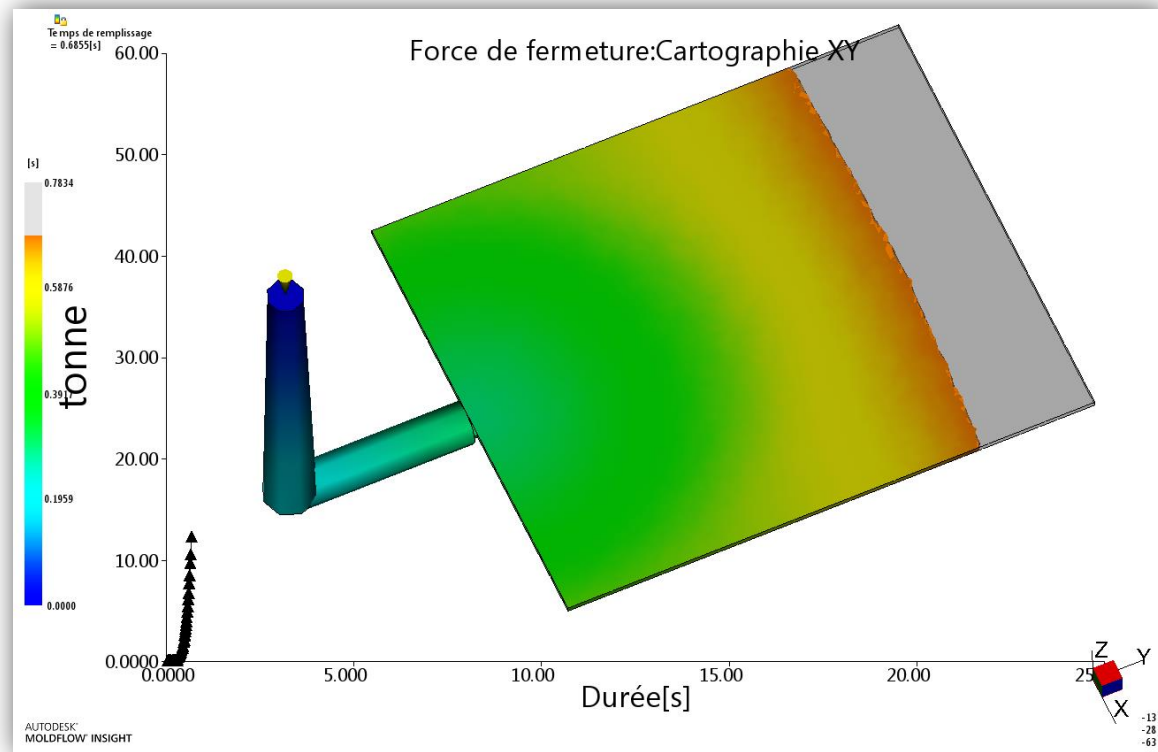
- 기본 CAD format으로 Export(DD and 3D)
- File format: .sat (v7) or .step
- Multi-bodies Export 가능



Post-Processing

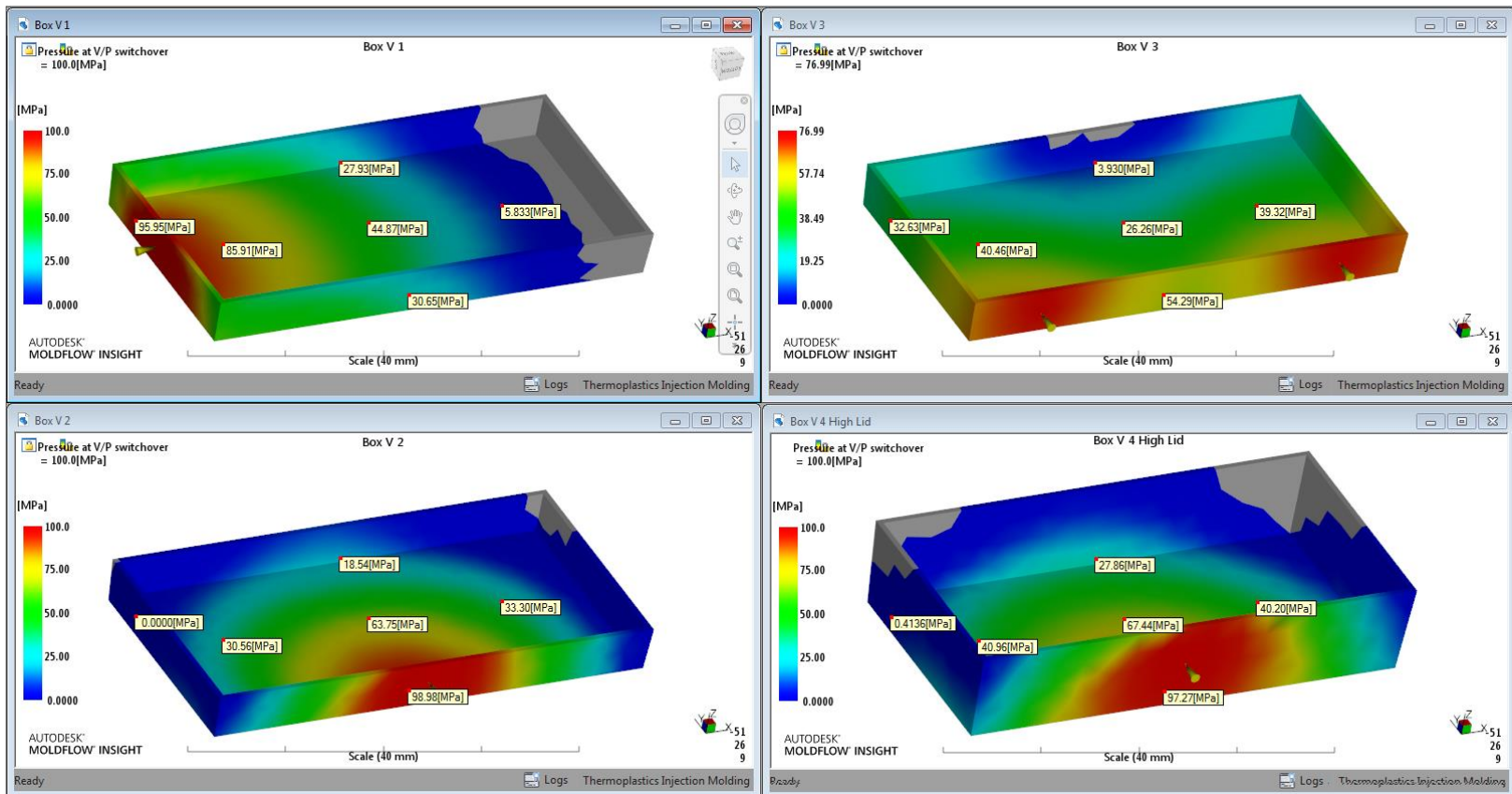
Animate XY plot

- 시간에 따른 XY Plot Animation 기능 추가(Overlay 동일적용)



Examine lock

- Lock View 적용시 동일위치의 결과 값 확인가능



Improved user interface speed

- Plot 활성화 속도 개선
 - Large models
 - Plot display
 - Animation
 - cutting plane speed
 - 20-30% 성능 개선

API Changes

- 여러 Synergy에서 API 사용 가능
 - Command line을 여러 Synergy에서 사용 가능
- Script changes
 - Make sure that the very first line of your script is:
'%RunPerInstance

Replace the lines

Dim Synergy

Set Synergy = CreateObject("synergy.Synergy")

with the following lines

Dim SynergyGetter, Synergy

On Error Resume Next

Set SynergyGetter = GetObject(CreateObject("WScript.Shell").ExpandEnvironmentStrings("%SAInstance%"))

On Error GoTo 0

If (Not IsEmpty(SynergyGetter)) Then

Set Synergy = SynergyGetter.GetSASynergy

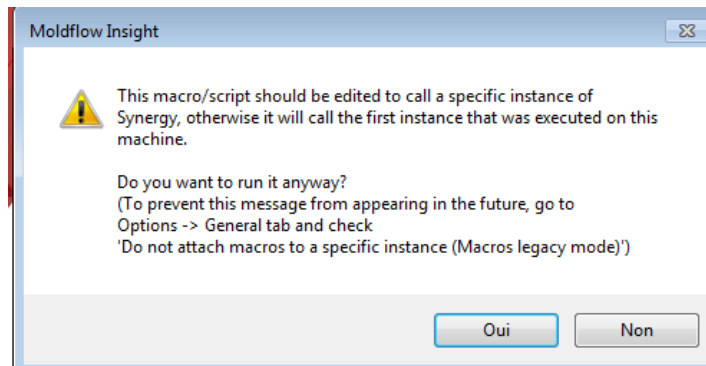
Else

Set Synergy = CreateObject("synergy.Synergy")

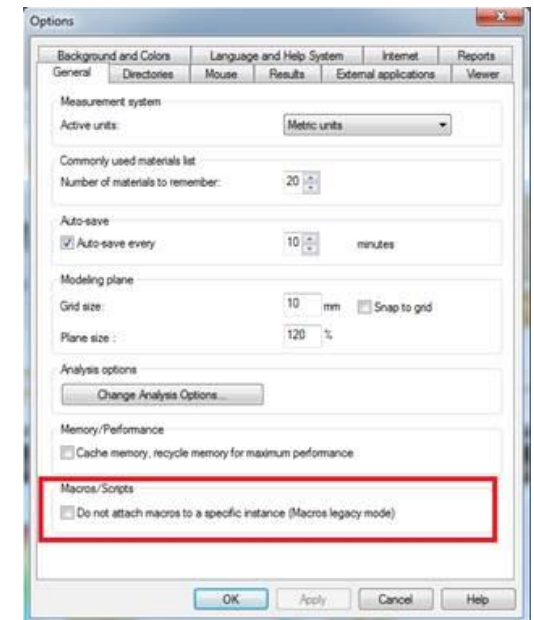
End If

API Changes

- 예전 Script도 사용 가능
 - 첫번째 Synergy에서만



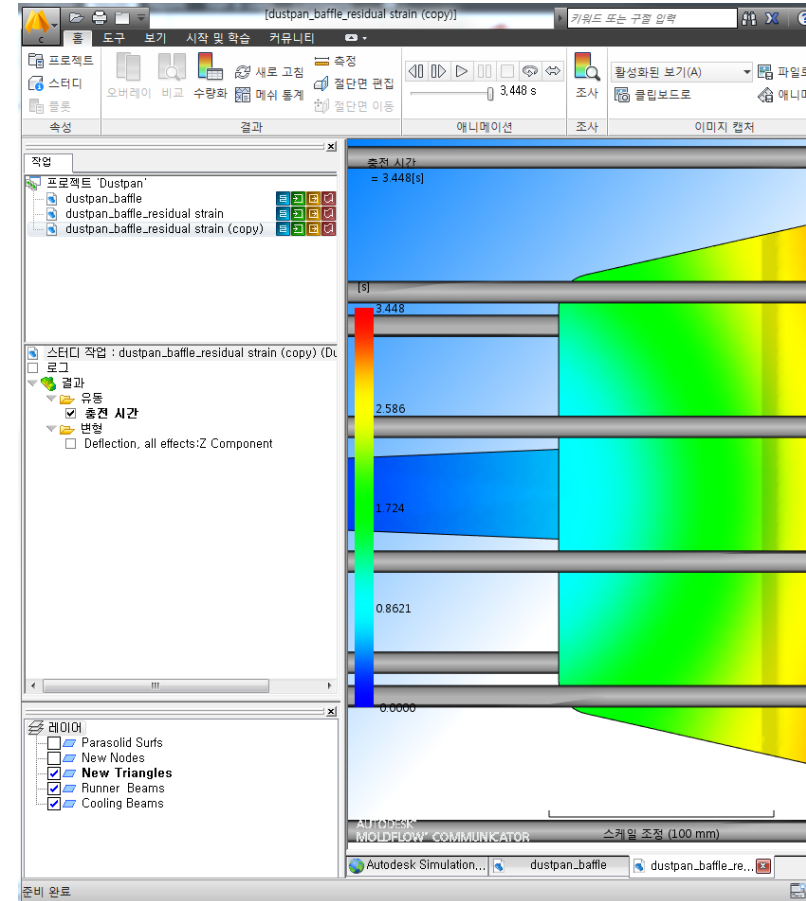
- 다음과 같은 옵션을 사용



Communicator changes

- Layer 이용가능
 - Synergy와 동일한 Layer로 생성

- 비교검토를 위한 3가지 이상
Study File open 가능



Meshing

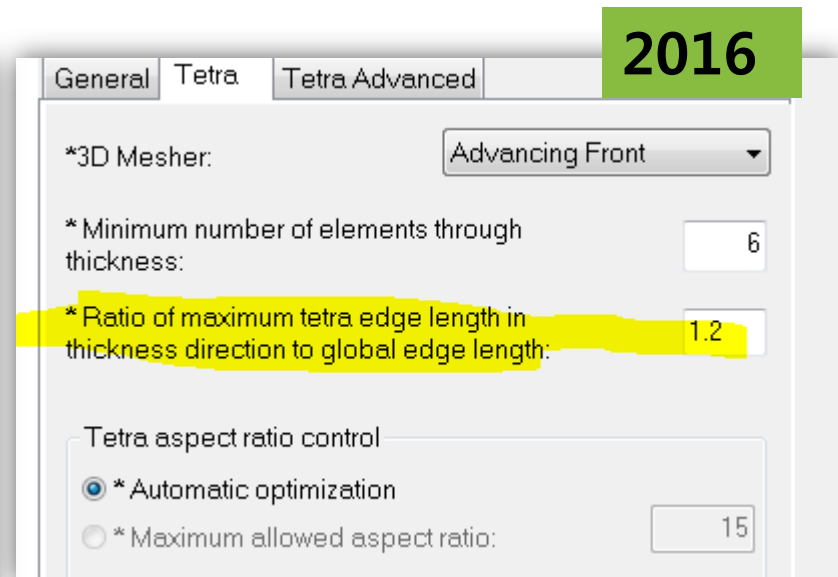
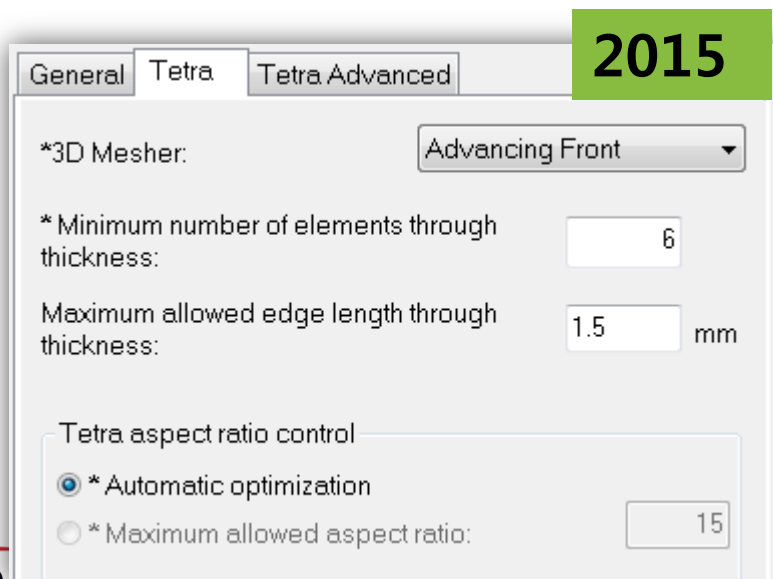
Mesh changes

- Curve Tab추가(Beam Mesh)

General	Curves
*Ratio of edge length to diameter for Feed Systems [0.1:4]:	0.50
*Ratio of edge length to diameter for Circuits [0.5:8]:	2.50
*Ratio of maximum chord height to chord length [0.02:0.3]:	0.050
*Minimum number of elements on each curve for Gates [1:5]:	2

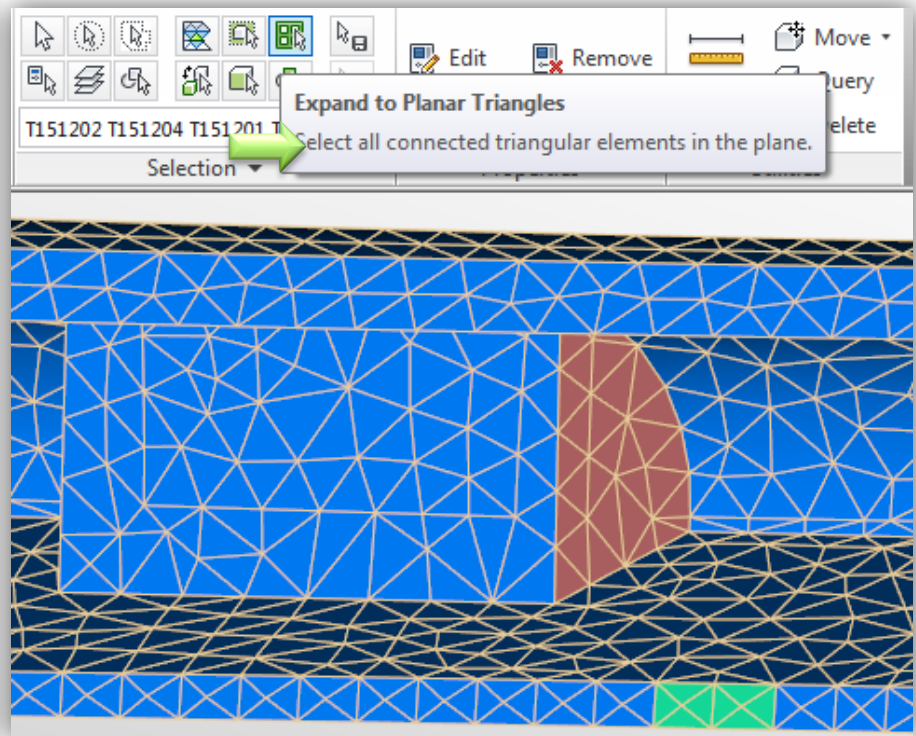
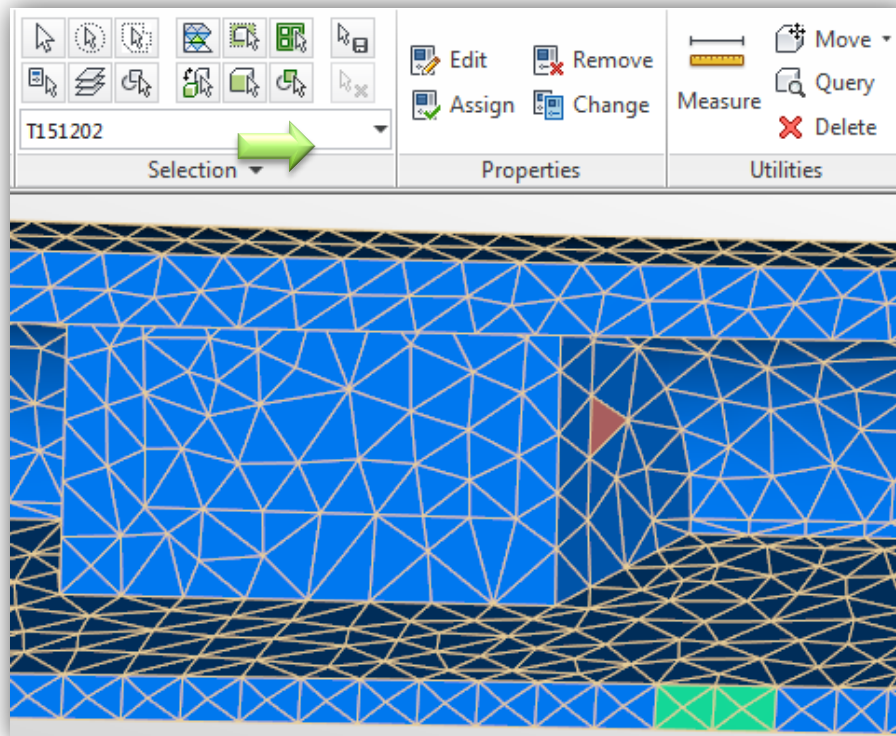
Mesh changes 3D

- 내부 Mesh size 조절 강화
 - Global Edge Length과의 비율로 정의
 - Global Edge Length가 변경되면 Tetra 모서리 길이가 자동으로 조정되어 비율 유지
 - 두툽한 영역에서의 커다란 Tetra Mesh 미생성



Expand selection on Face

- 1개의 Element 선택으로 연관된 면 선택 가능

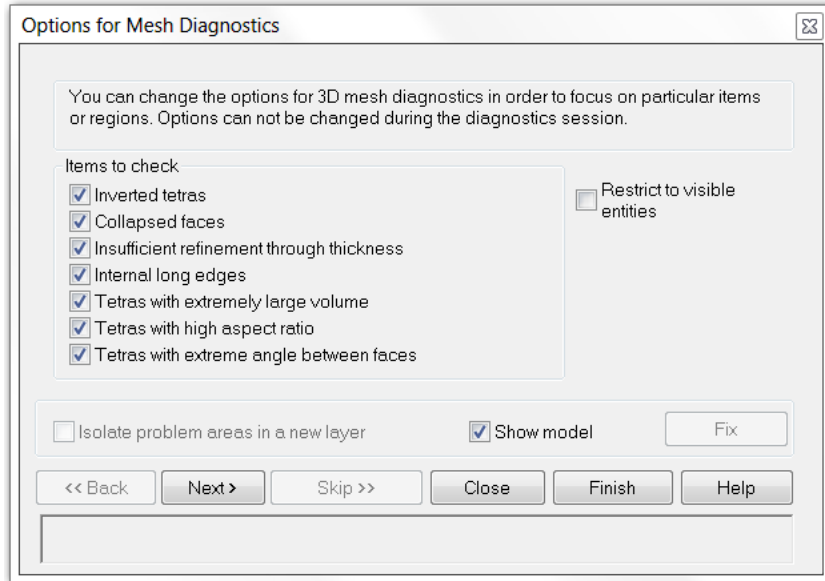


3D Mesh repair wizard 1 of 2

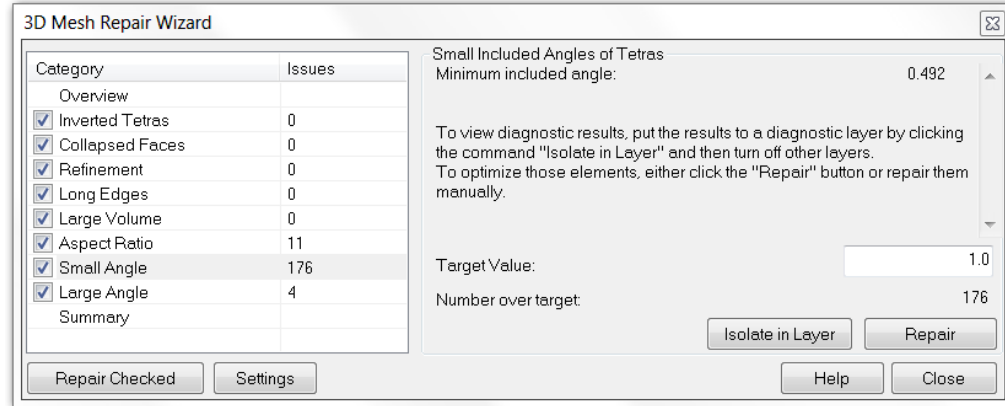
- New layout

- 문제있는 Mesh에 대한 Overview 확인
- 즉시 수정 가능 및 각 Issue들에 대한 내용 확인 가능

2015

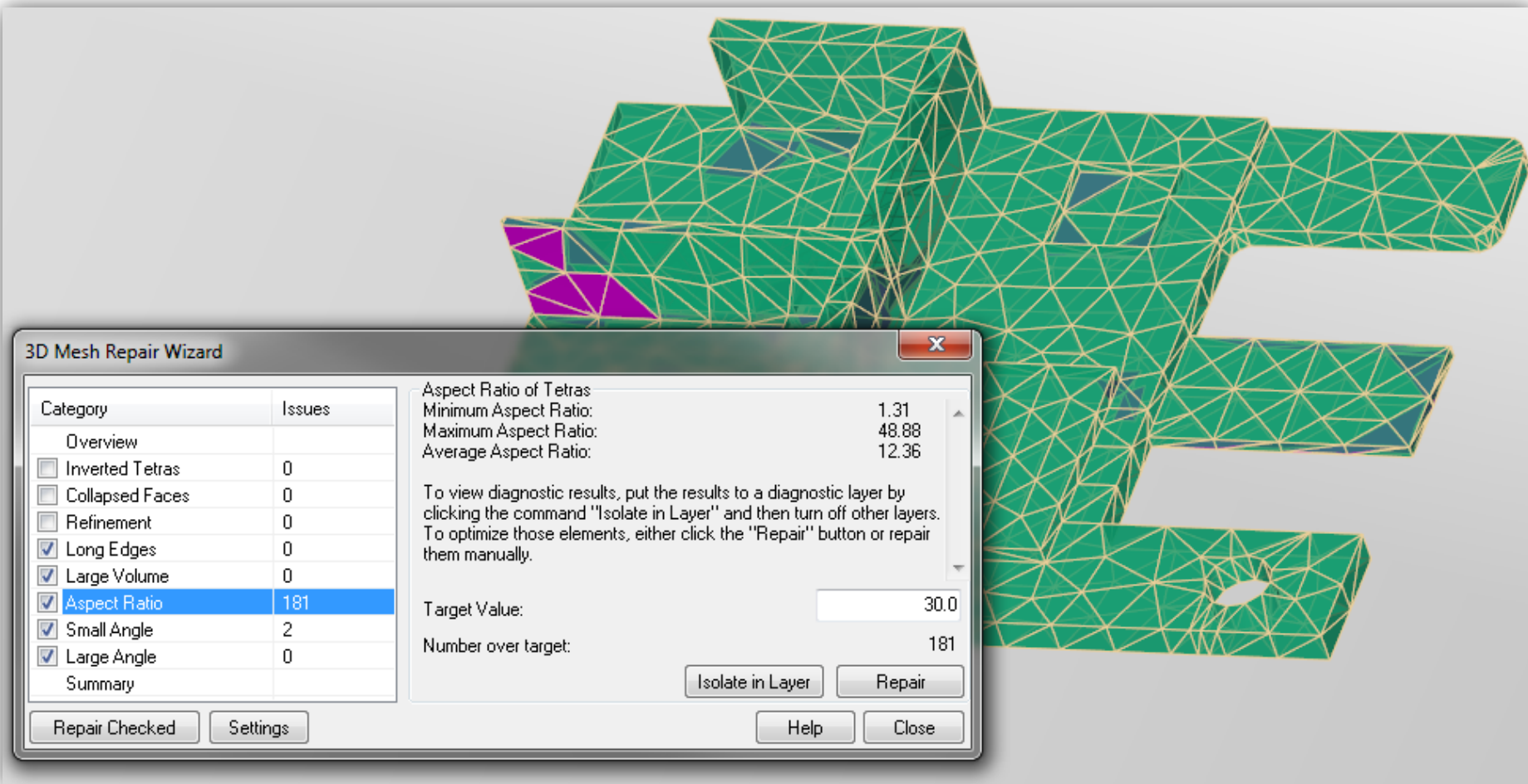


2016



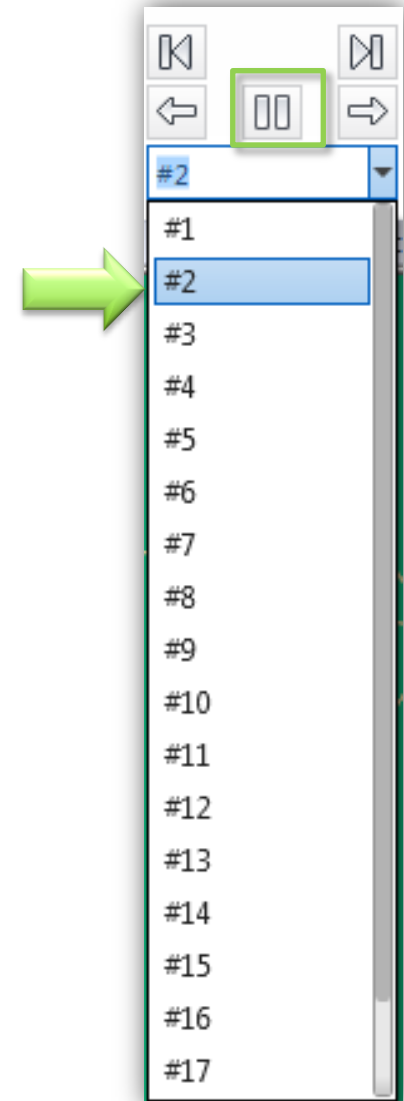
3D Mesh repair wizard 2 of 2

- Model에서 문제있는 Mesh 가시화



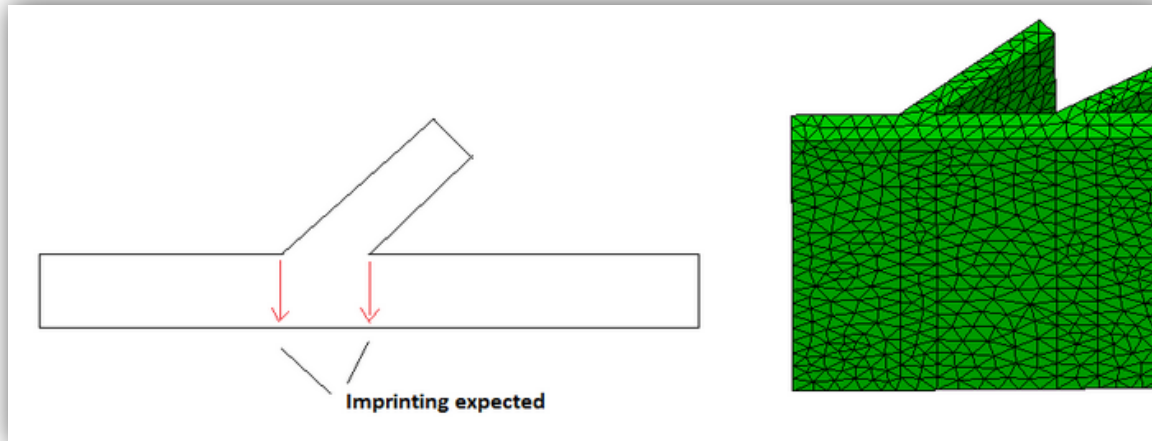
Improved diagnostics

- **Overlap Diagnostics**
 - 60 - 80% 시간 절감
 - "overlaps/intersections could not be found"
Issue 개선
- **Diagnostic navigator changes**
 - 문제있는 Mesh 위치 파악
 - Drop down list sometimes not visible
on high resolution screen

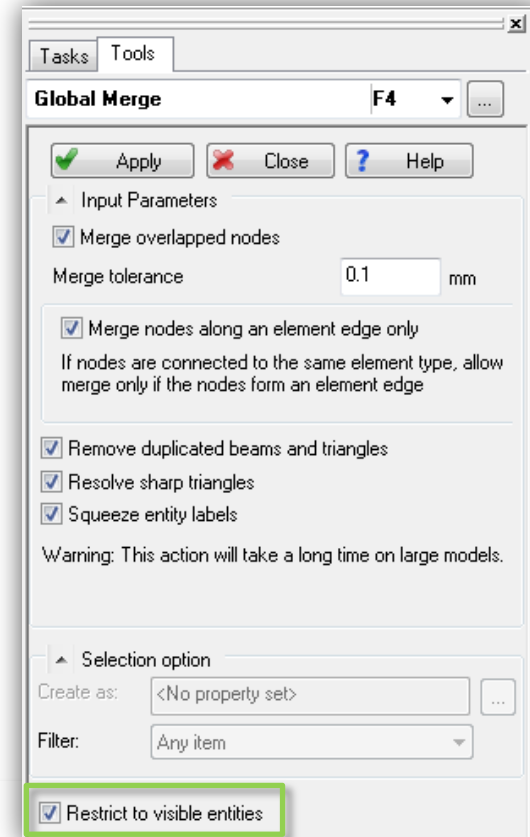


Surface mesh improvements

- 수직이 아닌 Rib의 각인 표시



- 보여지는 영역만 Global merge
 - 하단에 위치



Questions ?