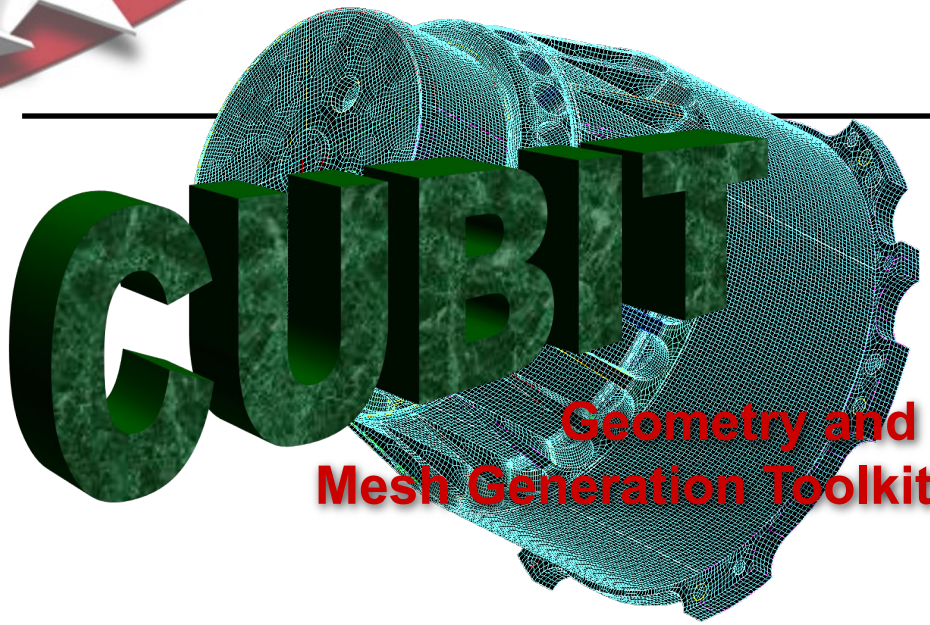


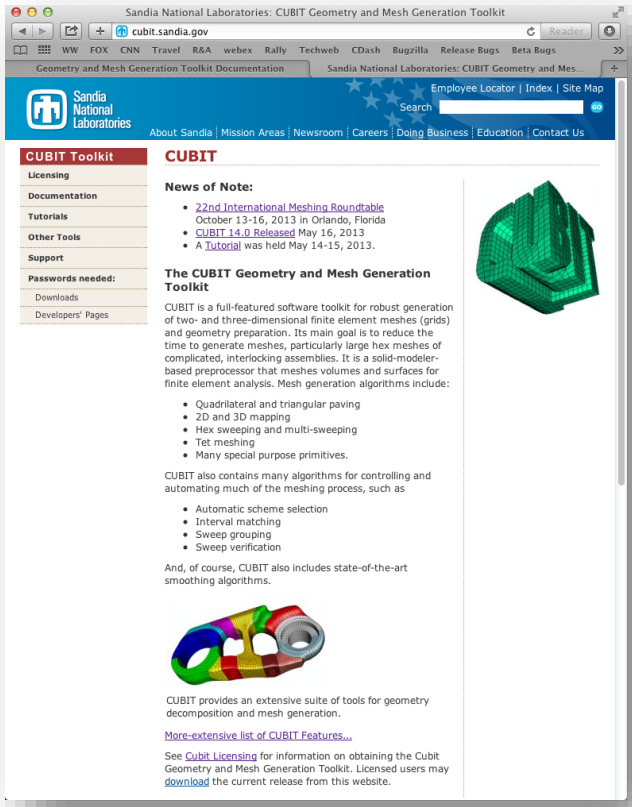
CUBIT Fast-Start Tutorial

1. Introduction

Sandia National Laboratories

Contact Info.

- **Bugs, enhancement requests:**
  - **cubit-help@sandia.gov**
- **Meshing Questions, CUBIT community:**
  - **cubit@sandia.gov**
    - **To subscribe, send an email to majordomo@scico.sandia.gov with "subscribe cubit" in the subject**
- **Cubit announcements**
  - **cubit-announce@sandia.gov**
    - **To subscribe, send an email to majordomo@sandia.gov with "subscribe cubit-announce" in the subject**
- **Website:**
  - **http://cubit.sandia.gov**



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Important Info.

- **Please power off personal electronics!**
- **Please do not attach personal electronics to SNL owned equipment!**

Platforms

Windows (64 bit)

Linux (64 bit)

Mac OS/X (64 bit)

Downloads	https://cubit.sandia.gov/ click on Downloads Enter Password
Password	Sandia: Your Kerberos password Others: from Cubit License
Sandia CEE Linux LAN	Add **/projects/cubit** to your PATH Type **cubit** at linux prompt.

Licensing

Sandia

Free, Site license in place
(Do not share offsite)

Other Government

Free.
Fill out online forms at cubit.sandia.gov/public/licensing.html
Pending approval from SNL licensing,
receive password to CUBIT Downloads
Share with colleagues in same organization
- All subject to license terms
Do NOT share outside of company/organization
1 Password = 1 point of Contact

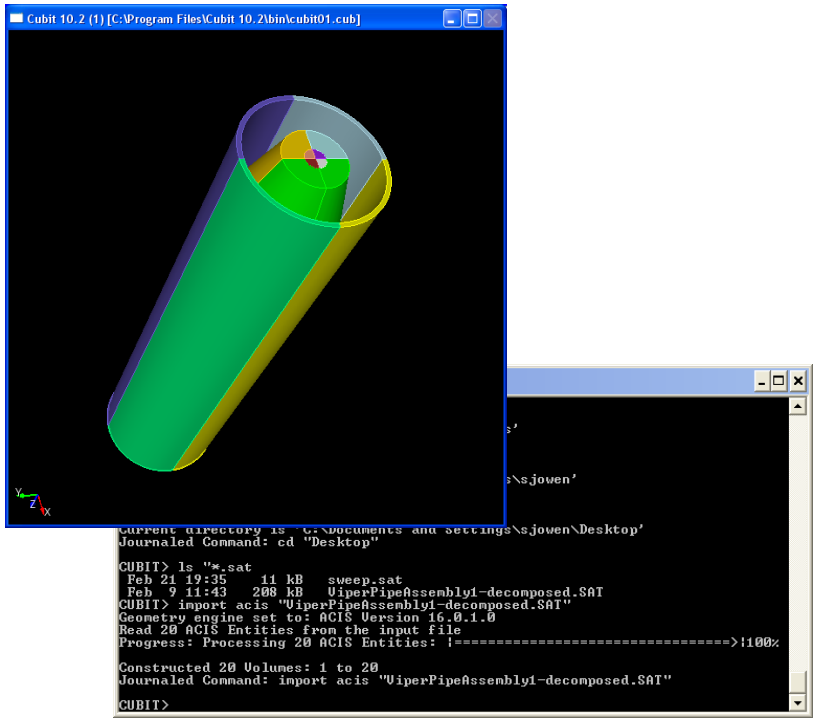
Others/Academic

See csimsoft for license terms
http://www.csimsoft.com

User Interfaces

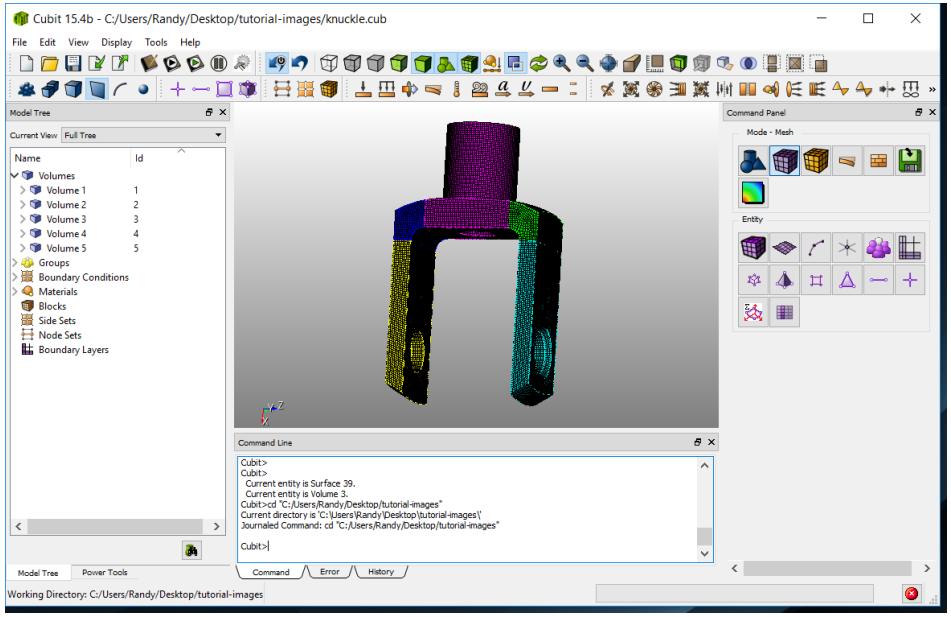
Simulation Modeling Sciences

Command Line



- Better Performance
- Power Users
- Harder to learn/use

Graphical User Interface



- Interactive, Intuitive
- More tools available
- Easy to learn/use

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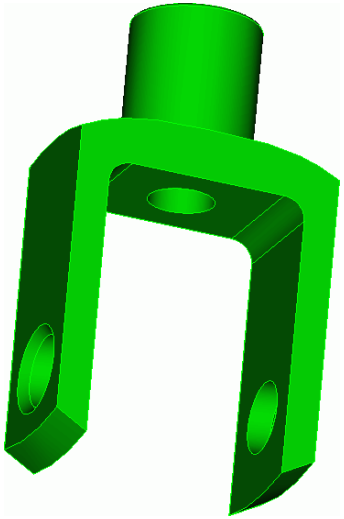

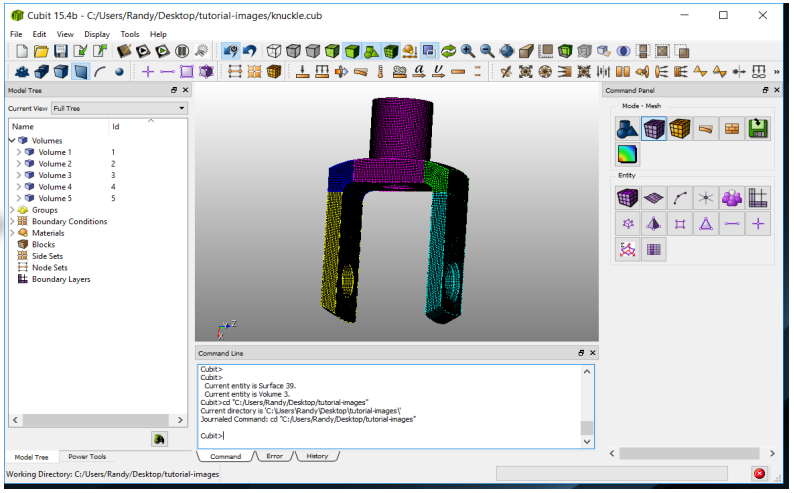

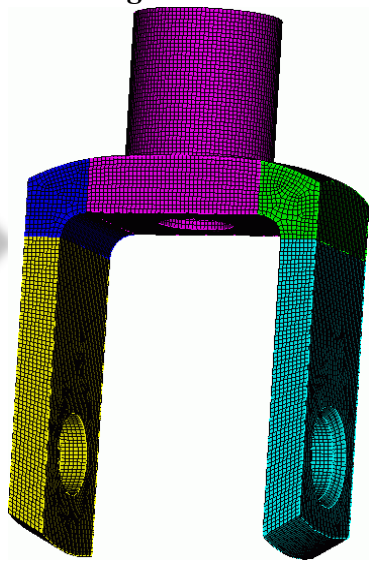

CAD Model **CUBIT** **Mesh**

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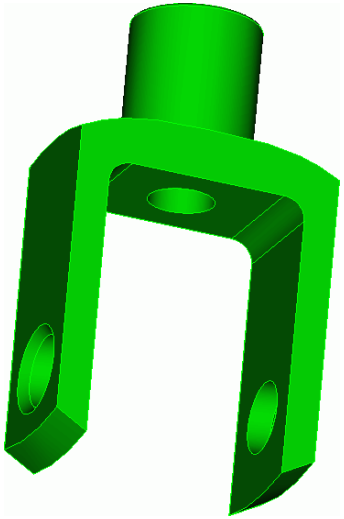

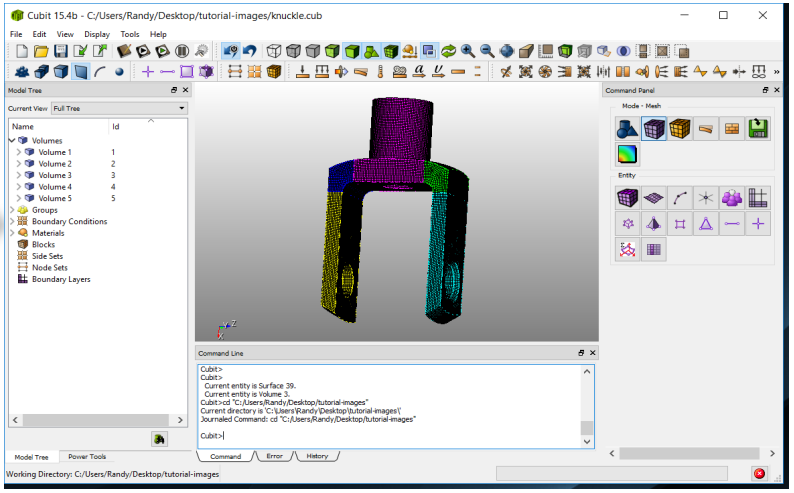

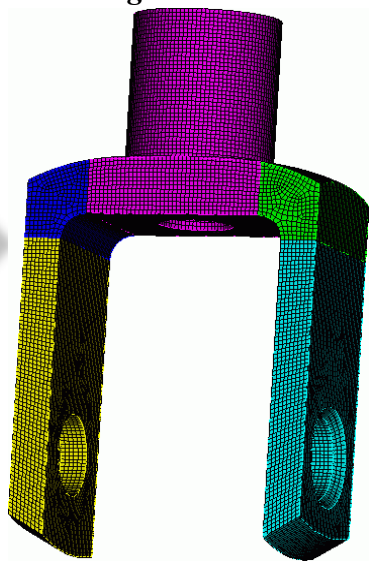

CAD Model **CUBIT** **Mesh**

- Meshing Tools
- Geometry Creation
- Geometry Preparation
- Mesh Optimization
- Boundary Conditions
- Scripting
- Automation

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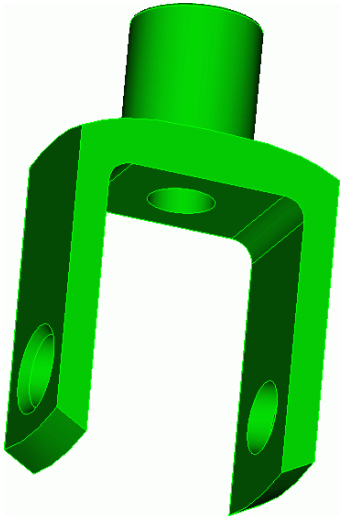

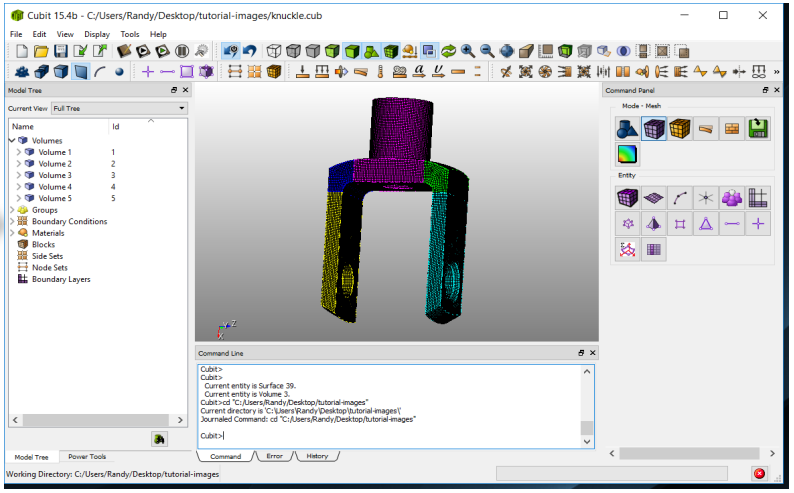

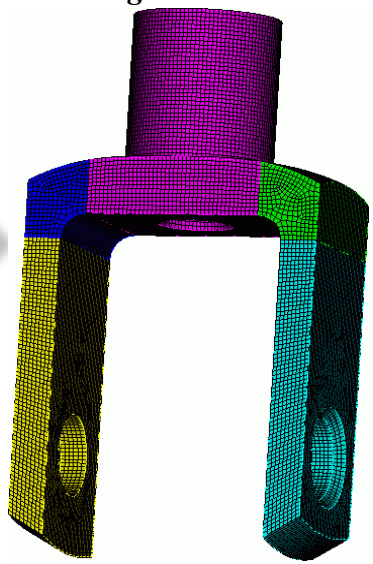

CAD Model

- ACIS
- STEP
- IGES
- Facets
- STL
- Exodus II

CUBIT

- Meshing Tools
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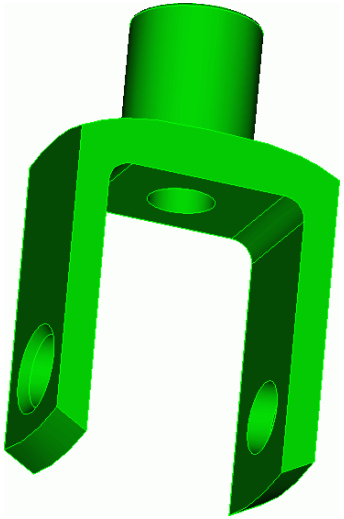
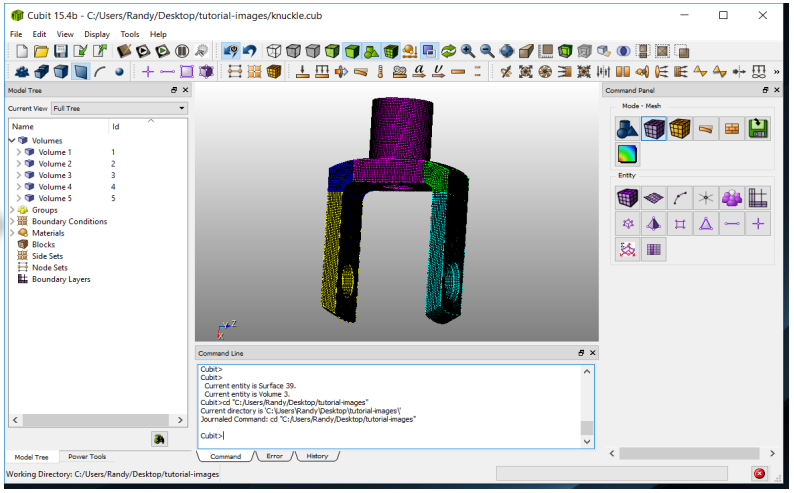
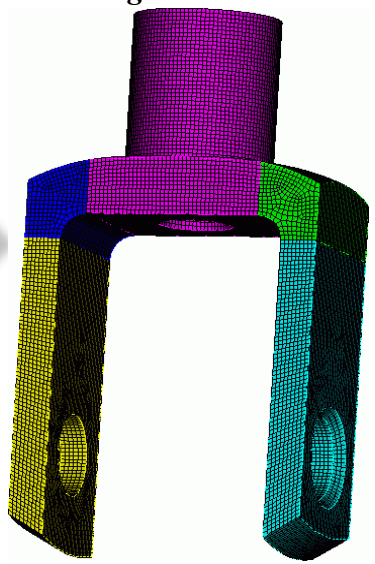
Mesh







CAD Model

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CUBIT

- Meshing Tools
- Geometry Creation
- Geometry Preparation
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- Scripting
- Automation

Mesh

- Exodus II
- Abaqus
- IDEAS-Universal
- NASTRAN-BDF
- Patran
- LS-Dyna
- Fluent

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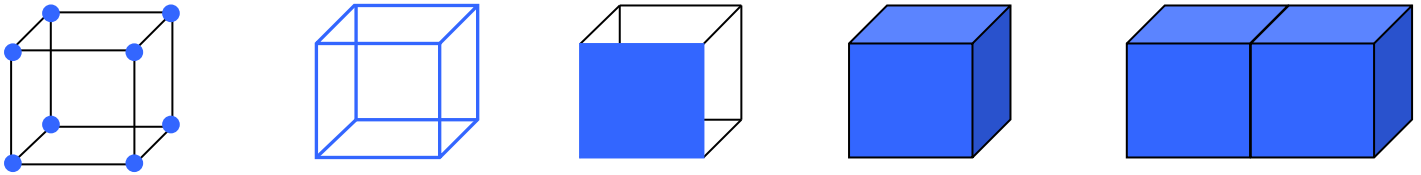
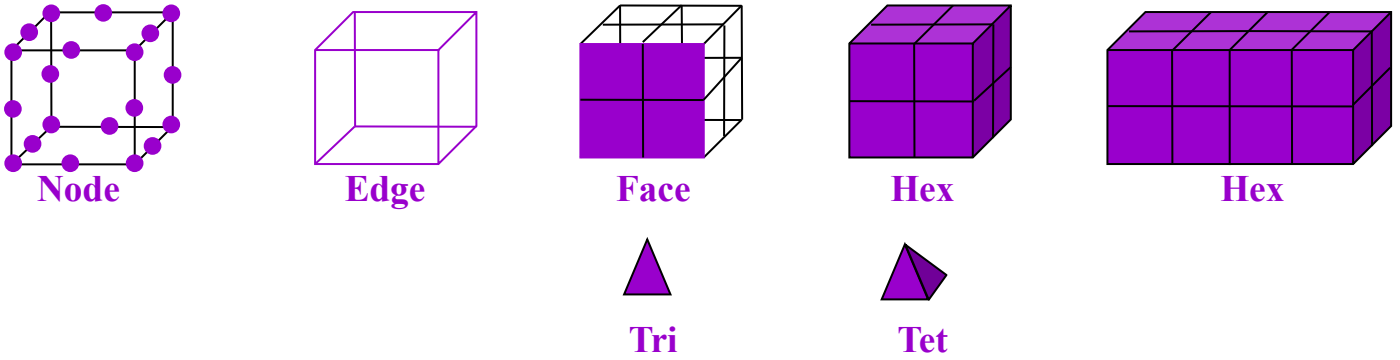
Entity Types in CUBIT

Geometry Entities in CUBIT



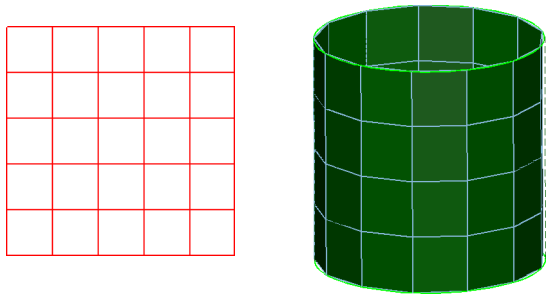
Mesh Entities, which approximate geometry entities of same dimension



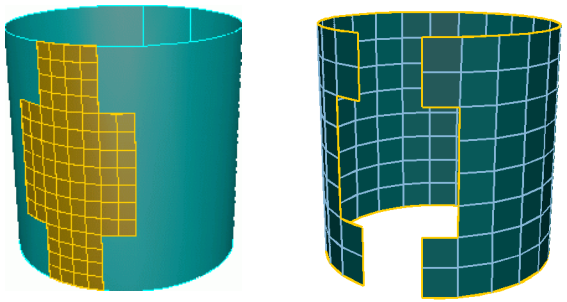
CUBIT Meshes Vertices First, Then Curves, Then Surfaces, Then Volumes
(Advancing Front Paradigm)

Meshing

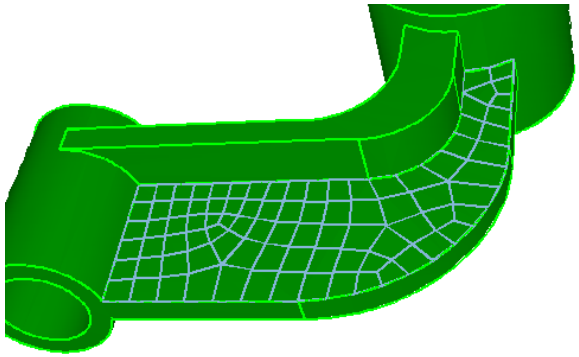
Surface Meshing



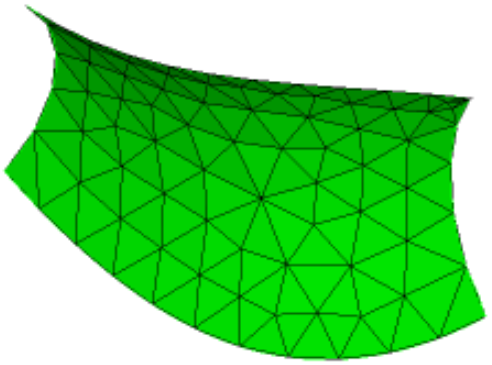
Mapped



Sub-map



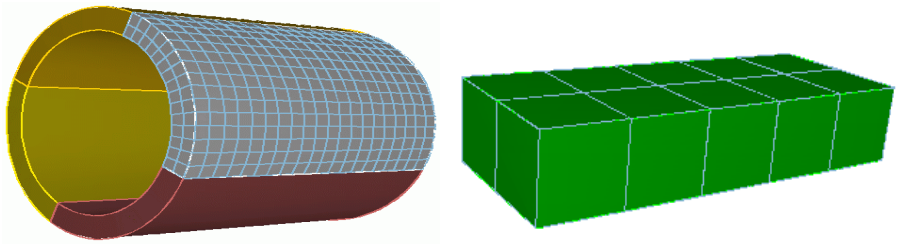
Pave



Trimesh

Meshing

Volume Meshing



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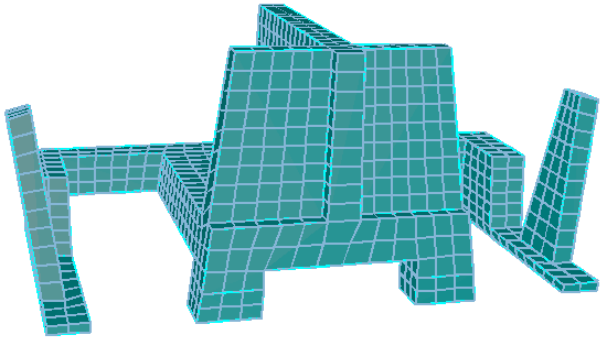
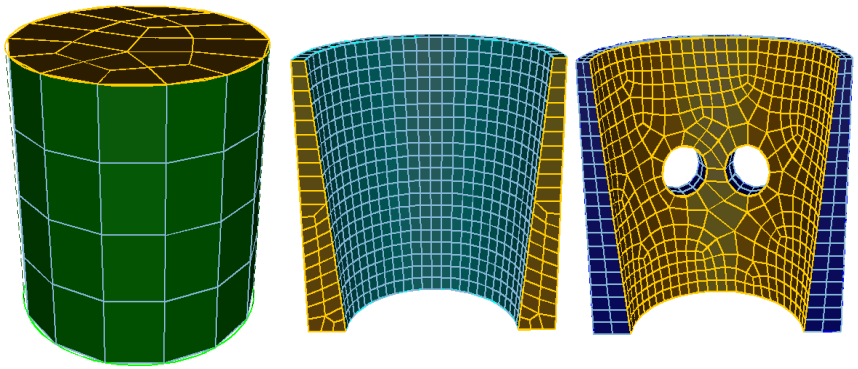
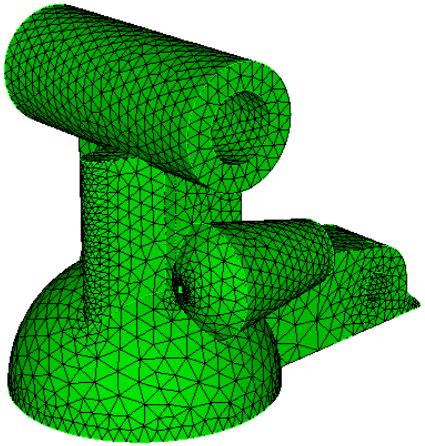


Sub-map

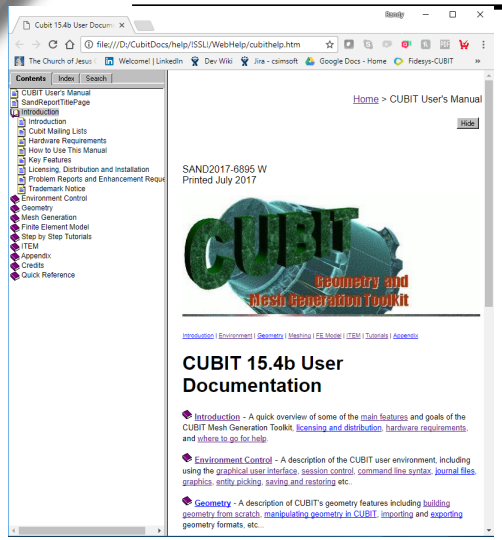


Sweep

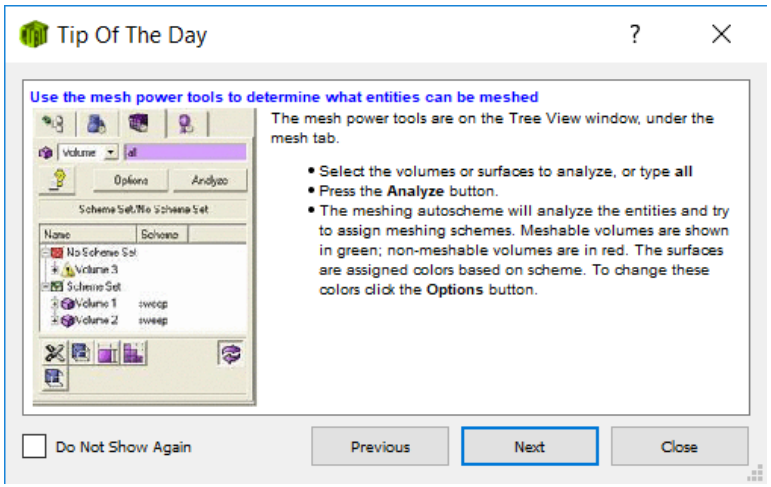


Tetmesh

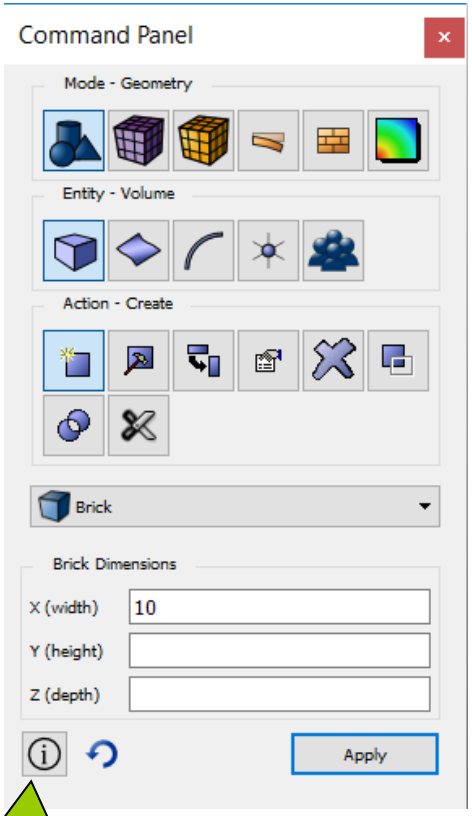
Online Help

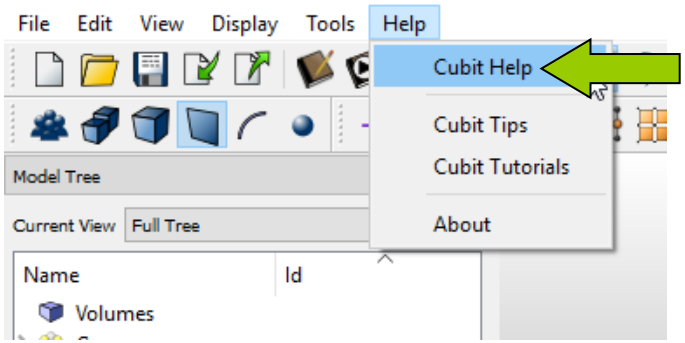


CUBIT online help from
https://cubit.sandia.gov



Tip of the Day: Lots of valuable nuggets at Cubit startup





User Documentation from the Help Menu (same as online help)

Command Panels: Help on specific command

cubit-help@sandia.gov

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