ENGINEERING AND SCIENTIFIC COMPUTATION OVER THE INTERNET

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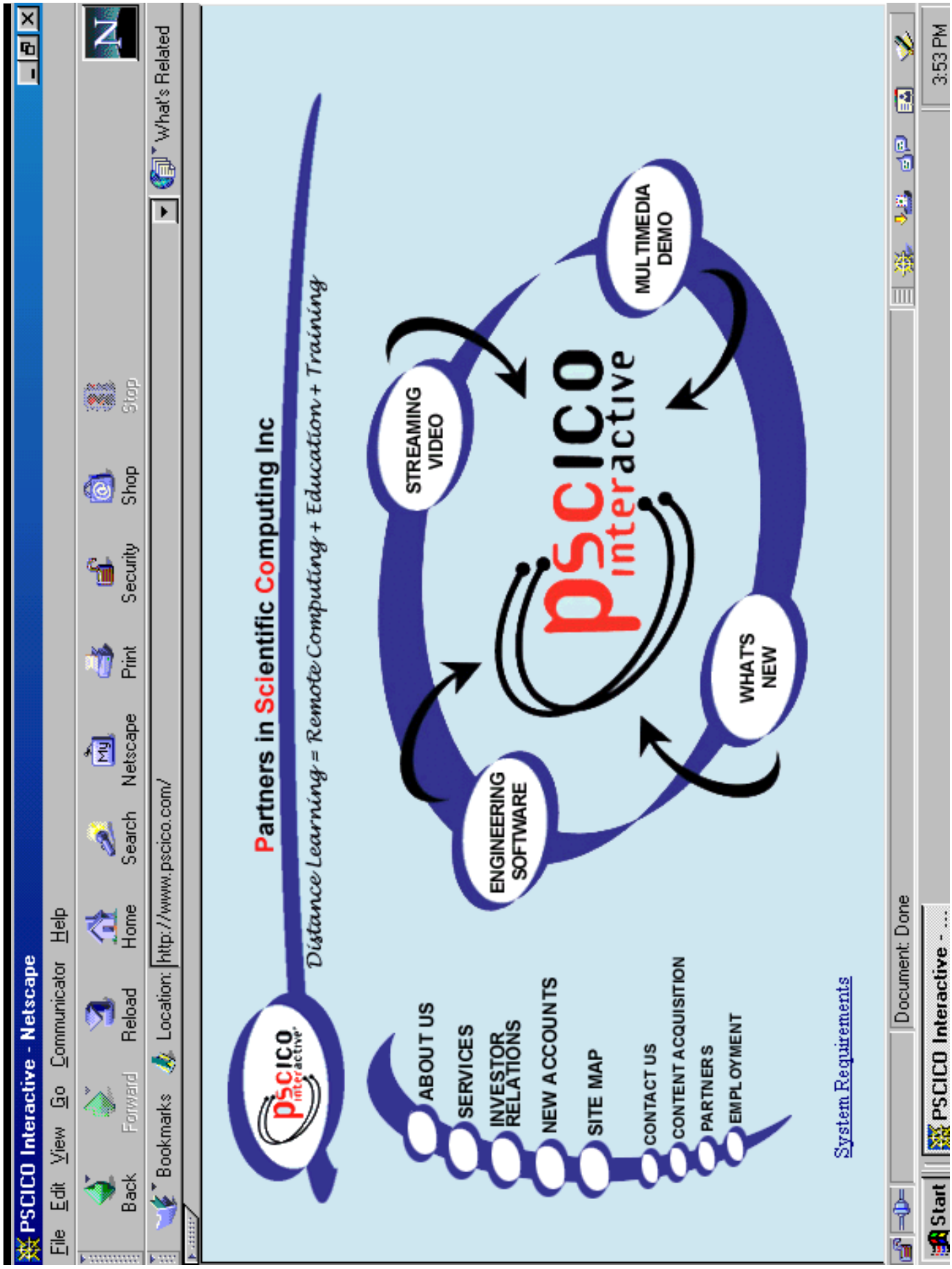
PSICO: Partners in Scientific Computing
Akron, Ohio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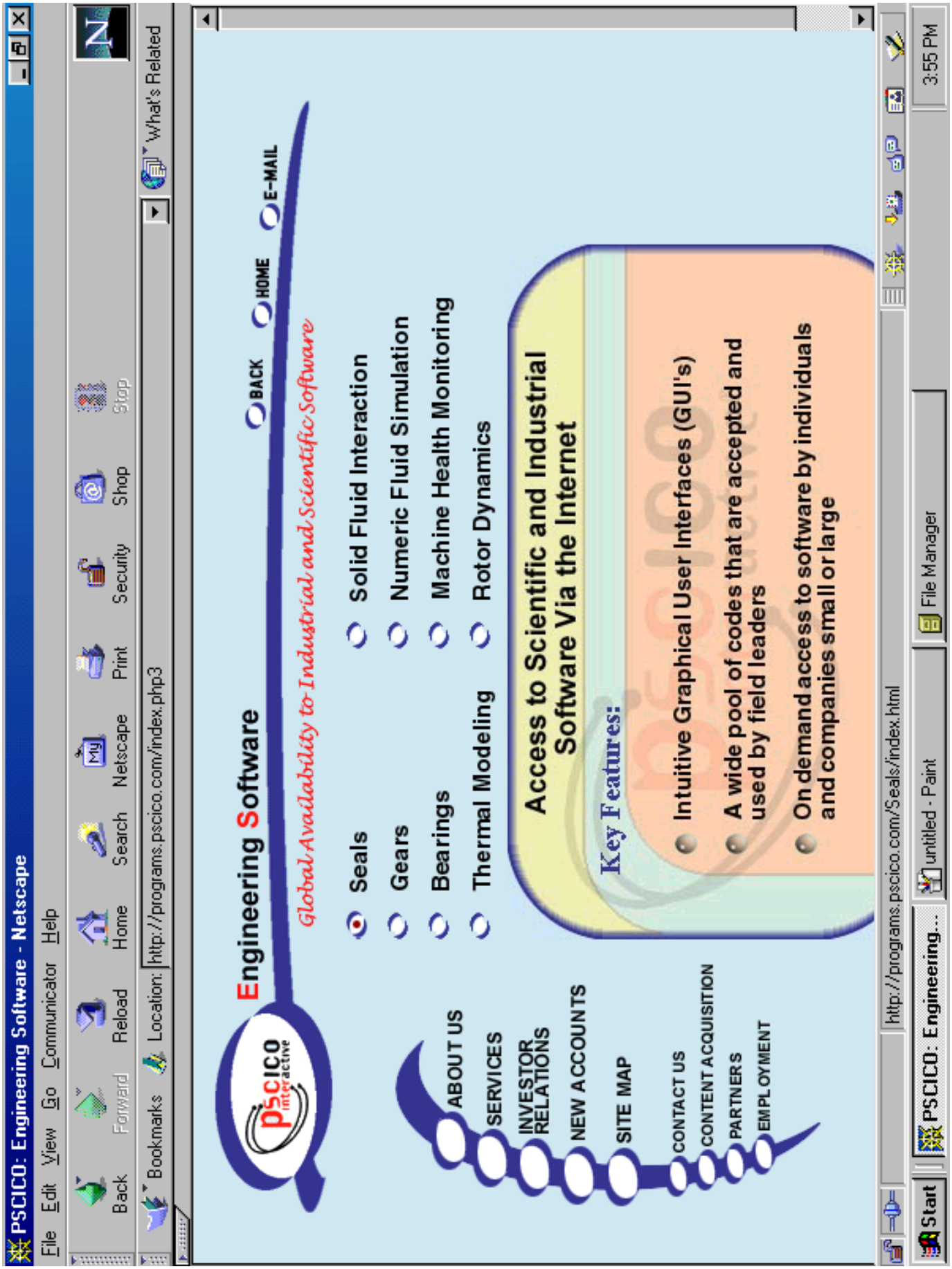
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Bookmarks Location: http://programs.pscico.com/Seals/index.html What's Related

Seals

Brief overview of types of seal codes and capabilities

FLUID — FLUID is a computer code which calculates thermodynamic and transport properties of pure fluid substances.

Run It Example Manual

GCYL — GCYL is a computer code which predicts the performance characteristics of a wide variety of gas lubricated seals in a cylindrical coordinate reference frame.

Run It Example Manual

GFACE — GFACE is a computer code which predicts the performance characteristics of a wide variety of gas lubricated seals in a polar coordinate reference frame.

Run It Example Manual

ICYL — ICYL is a computer code which predicts the performance characteristics of incompressible gas lubricated cylindrical seals. Performance characteristics include load capacity, leakage, stiffness and damping coefficients.

Run It Example Manual

http://programs.pscico.com/Seals/GFACE/examples/index.html

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GFACE EXAMPLE DATA FILES

Recess Seal

Inside Radial Tapered Land

Rayleigh Step Seal Example #1

Single Tapered Land Seal 2B

Single Tapered Land Seal 2C

Recess Seal

Hydrostatis Source Seal

Control Parameters - Netscape

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Control Parameters

Filename:

REC1

Description of Analyais: *(TITLE)*

RECESS SEAL

Load or Clearance Option: *OPTION = 1 OR 2*

- (●) **Calculate loads and moments, use provides shaft clearance and misalignment**
- ( ) **Calculate clearance, user provides load and initial clearance estimate**

Units: *(UNIT)*

- (●) **English**
- ( ) **SI**

Grid:

- ( ) **Uniform**
- (●) **Variable**

BOUNDARY CONDITIONS:

- [ ] **Periodic *(JOINED)***

Document: Done

Seal Geometry - Netscape

e Edit View Go Communicator Help

Seal Geometry

nner Diameter: *INNER*

N/A (in)

Outer Diameter: *OUTER*

N/A (in)

Number of Pads: *NPAD*

1

Start of the First Pad Region: *START*

N/A (degrees)

Clearance: *CLEARANCE*

0.0005 (in)

Pad Angle: *PADANGLE*

N/A (degrees)

Misalignment X-Axis: *MISALIGN*

N/A (in)

Misalignment Y-Axis

N/A (in)

Number of Radial Grid Points: [51 max] *GRIDM*

16

Number of Circumfrential Grid Points: [361 max] *GRIDN*

21

Continue | Clear Form

Document: Done

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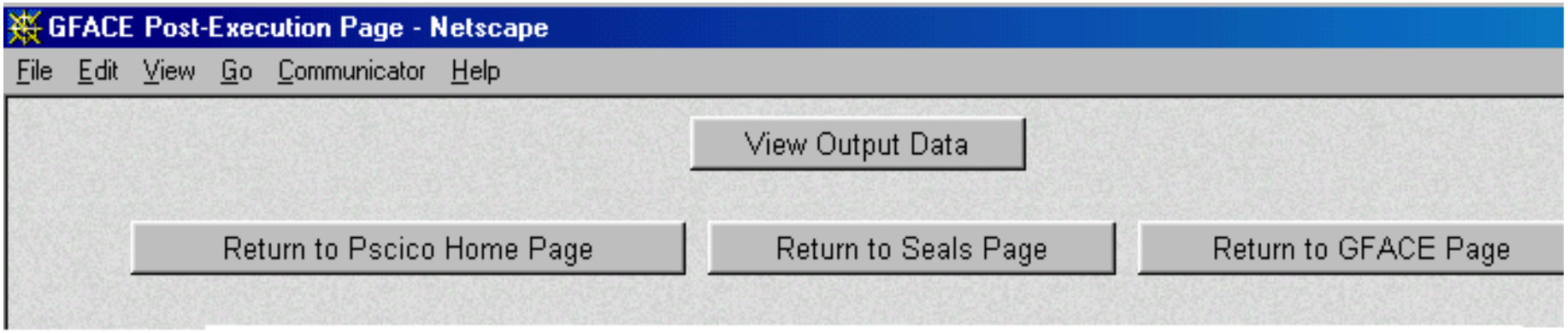
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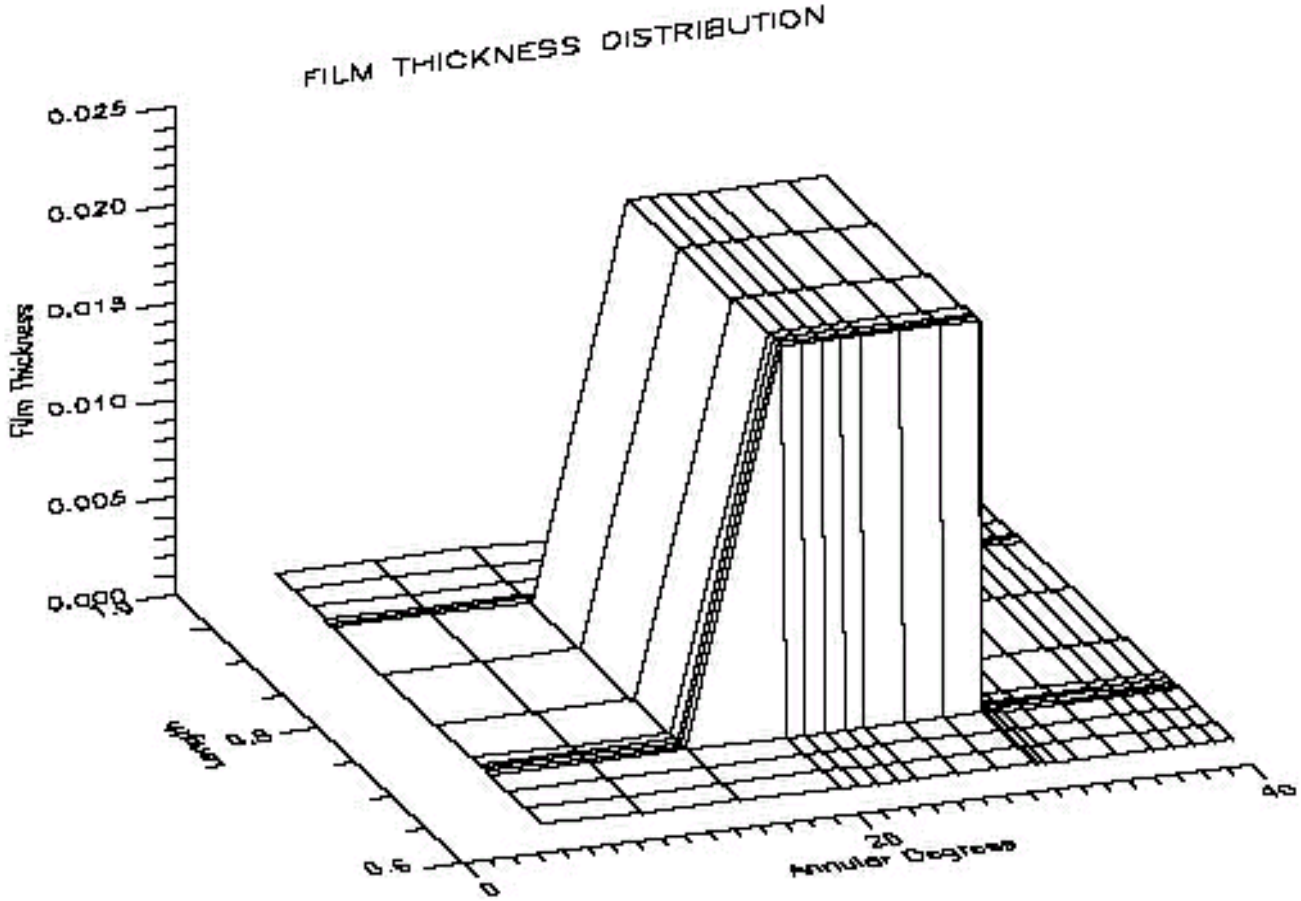
Return to Pscico Home Page
Return to Seals Page
Return to GFACE Page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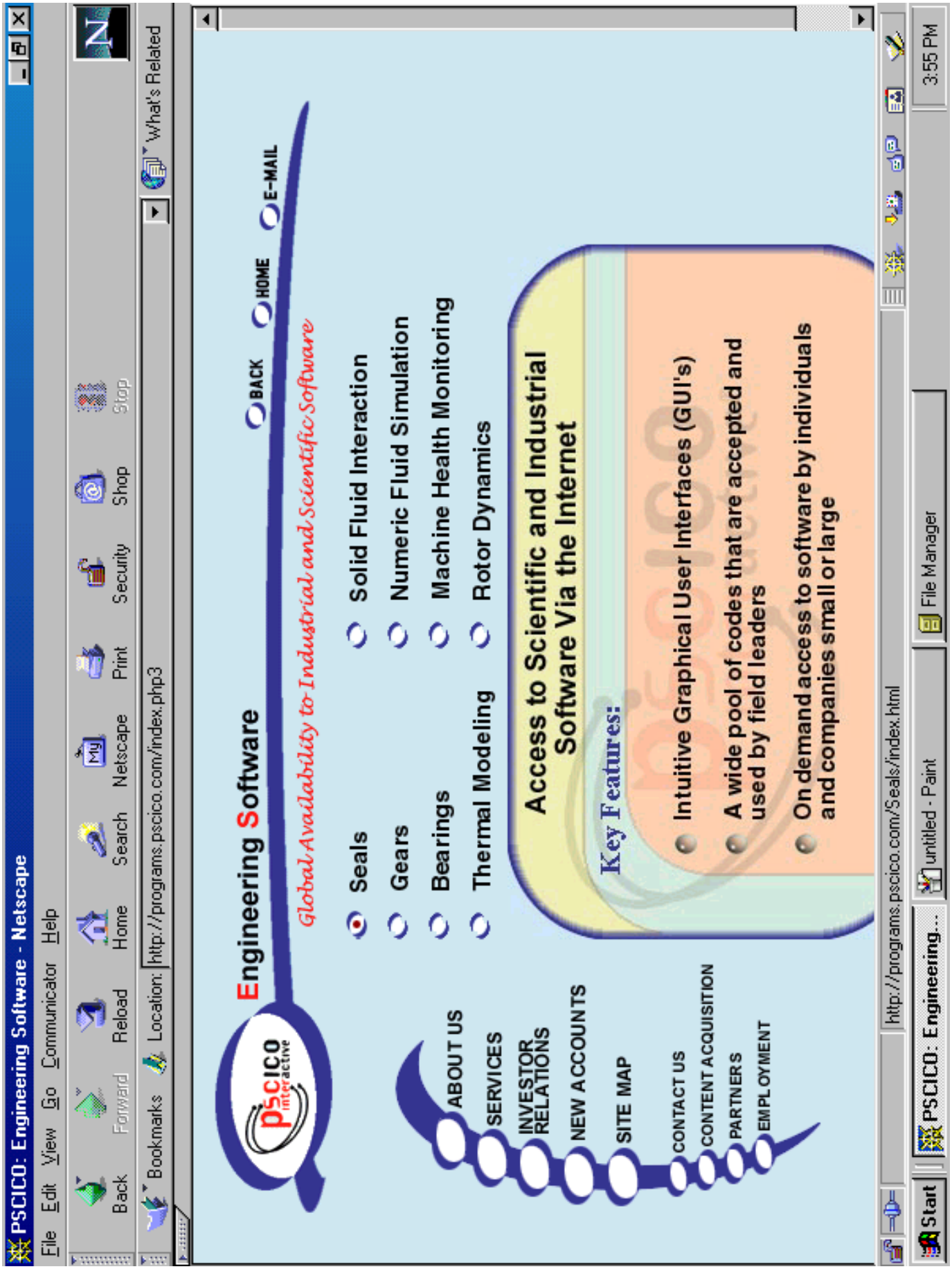
0.020
0.015
0.010
0.005
0.000
Length
0.5
0.8
1.0
0
20
40
Annular Degrees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Bookmarks Location: http://programs.pscico.com/Gears/GEARDYN/example1pinion.html What's Related

View / Edit Data File

NOTE: Input Data Format

* Please note that the contents of this file is for display only. *

Filename: planetg **Description:** Gear used in the examples

Gear Type: Spur

Number of Teeth: 30

Pressure Angle: 20 degrees
(If Pressure Angle is Zero, Enter Next Two Variables)

Pressure Angle at Drive Side: 0.0 degrees

Pressure Angle at Coast Side: 0.0 degrees

Outside Diameter: 4.025 in

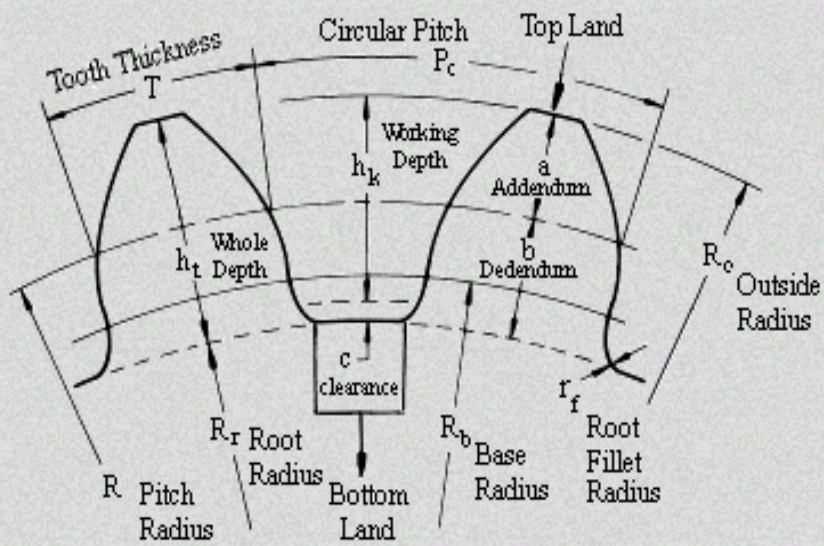
Inside Diameter: 0.0 in
(for internal type of gear)

Diametral Pitch: 8.0 in^{-1}

Gear Tooth Data

Face Width: 2.82 in

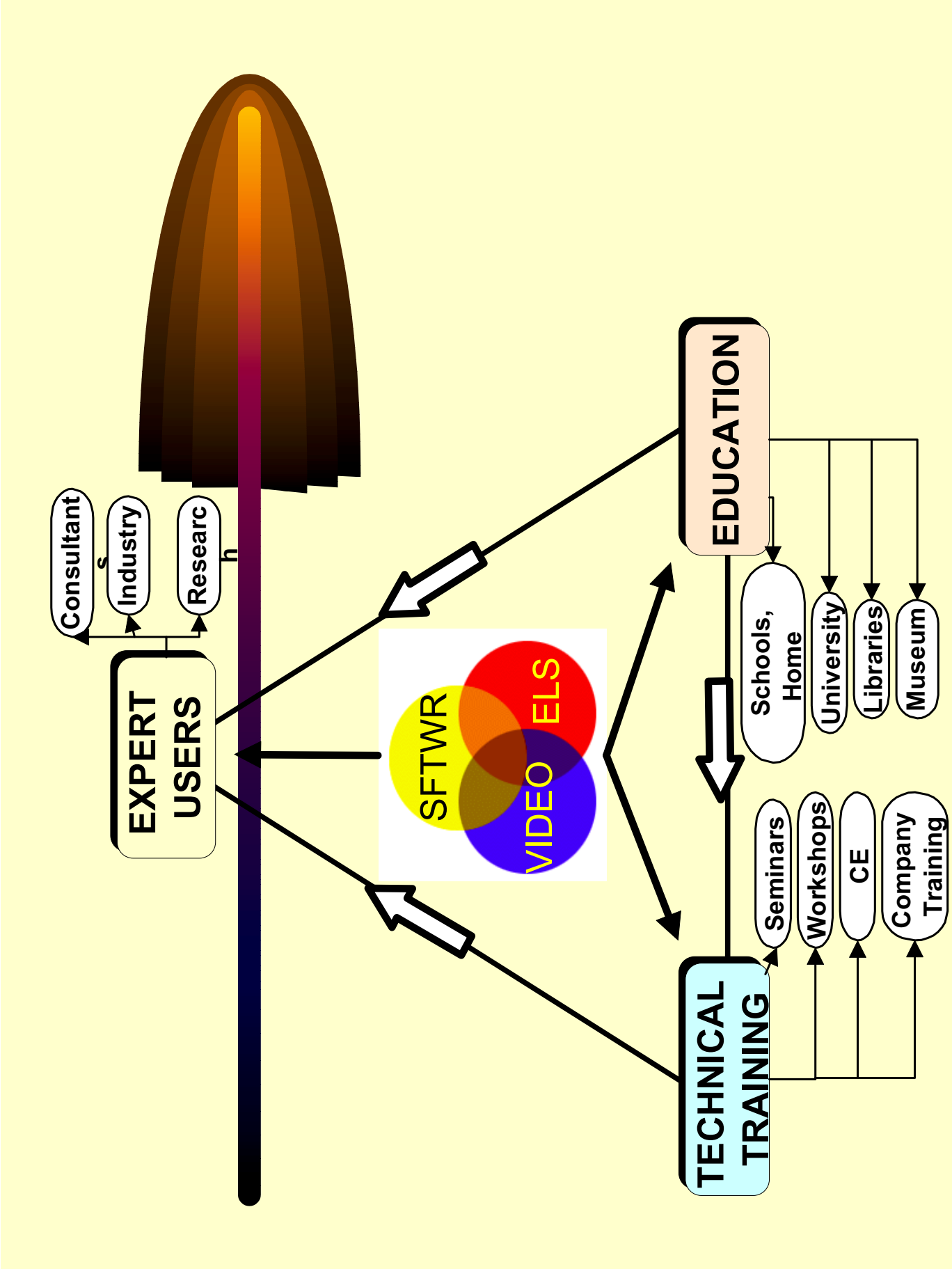
Fillet Radius, Maximum: 0.05 in



Basic Gear Geometry

The output files of GEARDYN program are:

Run-Time Text Output	Text	
Gear Tooth Load for Sun-Planet Mesh	Text	Plot
Gear Tooth Load for Planet-Ring Mesh	Text	Plot
Pressure * Sliding Velocity (PV) for Sun-Planet Mesh	Text	Plot
Pressure * Sliding Velocity (PV) for Planet-Ring Mesh	Text	Plot
Flash Temperature for Sun-Planet Mesh	Text	Plot
Flash Temperature for Planet-Ring Mesh	Text	Plot
Hertz (Contact) Stress for Sun-Planet Mesh	Text	Plot
Hertz (Contact) Stress for Planet-Ring Mesh	Text	Plot
Heywood (Bending) Stress on Planet Gear Tooth for Planet-Ring Mesh	Text	Plot
Heywood (Bending) Stress on Ring Gear Tooth for Planet-Ring Mesh	Text	Plot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