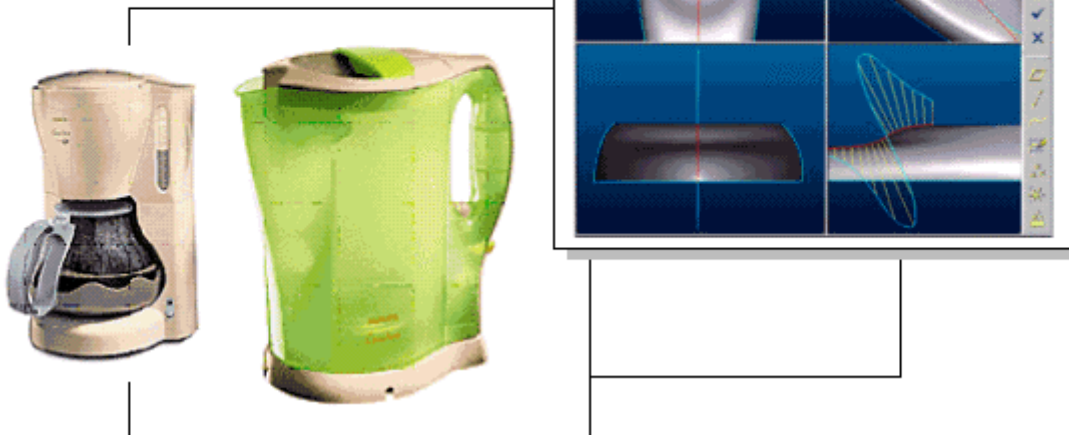


Topics:

- **PTC Product Focus: Interactive Surface Design Extension (ISDX)**
- **This Week's Technical Tip: Pro/Library Installation and Configuration**
- ***Upcoming Events and Training Class Schedule***

-
- **PTC Product Focus: Interactive Surface Design Extension (ISDX)**
-

Pro/Engineer ISDX Interactive Surface Design Extension



Parametric Modeling meets Freeform Styling

Pro/Engineer Interactive Surface Design is defining the next generation of surfacing technology. This new functionality has unique free form curve and surface modeling capabilities with increased levels of interaction and flexibility. Allowing designers and engineers to work in a fully free form environment within a parametric modeling environment truly offers the ultimate integration of design and engineering.

ISDX allows designers and engineers to work in a unique environment with great design flexibility through the creation of aesthetic shapes and other complex free form geometry built within the parametric modeling foundation of Pro/ENGINEER.

Intuitive and Interactive Curves and Surfaces

Users can start very conceptually by developing geometry from scratch, a sketch, or other reference data, gradually developing the concept into the production model. Many design alternatives can be explored in a short amount of time throughout the entire product development process, with the confidence that all design, engineering and manufacturing information will be updated. This will provide the seamless communication throughout the entire process by maintaining design intent from the very beginning, with focus on value-added design, not data transfer and interpretation.

ISDX has the following capabilities:

Curve Creation

- 3D Curves
- Planar Curves
- Curves on Surface
- Sketch directly on a surface
- Project a curve to surface
- Create curves parametrically

Curve Editing

- Move interpolation points or control points dynamically or numerically
- Snap with soft points to any other entity
- Modify tangency constraints dynamically on screen or numerically
- Connect curves to curves and surfaces with tangent and curvature continuity
- Add interpolation points
- Extend dynamically with or without constraints
- Delete points or entire segments
- Combine and Split curves
- Interactive curvature plots

Surface Creation

- Create surfaces from curves (internal feature curves and other Pro/ENGINEER curves) and edges of surfaces or solids
- Add internal curves
- Create surfaces with partial boundaries

Surface Editing

- Reshape surfaces by editing the defining curves
- Add/remove internal curves to redefine the surface shape
- Replace boundary curves/edges to redefine the surface shape
- Interactive Surface Connections

- Matched (G0)
- Tangent (G1)
- Curvature (G2)
- Leader / follower relationships (G1 or G2)

Modeling Environment

- Four view window display (three isometric, one 3D view)
- Reference any defining geometry such as points, planes, curves, surfaces, and solids
- Work directly off imported geometry, facets, and sample data
- Local regeneration mechanism
- Local resolve mode
- Drive model changes through parametric modification
- Optimization through Behavioral Modeling™
- Downstream use for additional geometry creation, engineering, simulation, and manufacturing

- ***This Week's Technical Tip: Pro/Library Installation and Configuration***

The basics steps to configure Pro/Library modules to work with Pro/Engineer:
(these are links to each step below)

- [Install Pro/Library](#)
- [Setup the Index Files to Work With Pro/Engineer](#)
- [Create a Pro/Library Catalog](#)

Pro/Library is a collection of Pro/Engineer parts and family tables that are grouped into 8 libraries:

Basic Library
Connector Library
Electrical Symbol Library
Human Factors Library

Mold Base
Pipe Fitting Library
Piping and Heating Library
Tooling Library

Typically, the libraries are installed to a single library loadpoint which is then specified in the **pro_library_dir** config option. Once installed, the libraries can be browsed and accessed directly from within Pro/Engineer. To facilitate this, Pro/Engineer provides a cataloging utility which automatically creates search paths to all the parts found in the Pro/Library loadpoint. By cataloging the library load point, custom parts can be added to any existing or custom library and also be accessed in the same way while maintaining parent/child relationships for later regeneration.

Note: This installation guide will use the Connector Library (connlib) as an example and can be used for any Pro/Library installation.

Install Pro/Library

First, choose a location for the libraries. Typically, this would be **X:\ptc\pro_stds\library_dir** where X can be any drive including a mapped network drive. Then run setup.exe (Figure 1) from a Pro/Library CD and install the library to the Pro/Library load point. Note that each library must be installed in its own folder within the Pro/Library load point and it is recommended to use the default folder name to make configuration easier.

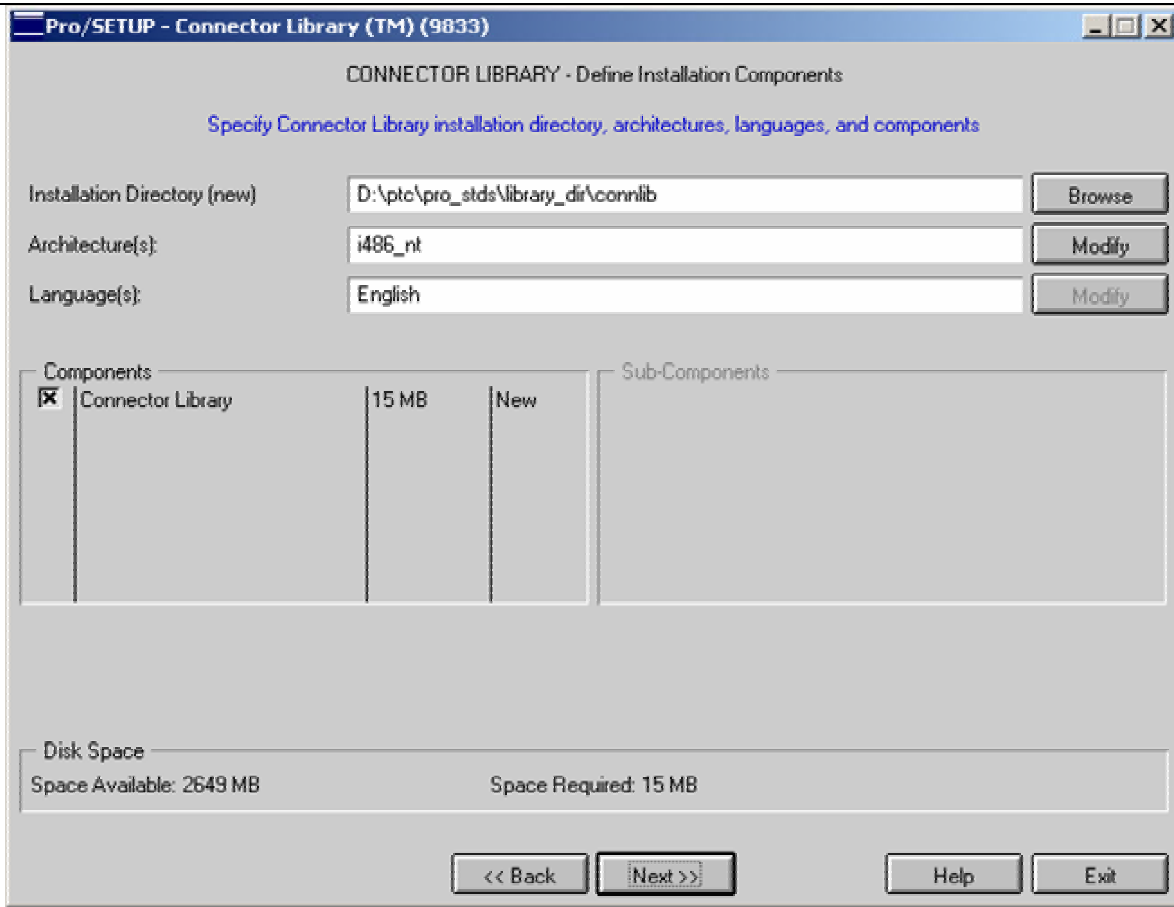


Figure 1 – Connector Library Setup

Next, set the **PRO_LIBRARY_DIR** config option to the path of the Pro/Library load point:

For example: **X:\ptc\pro_stds\library_dir**

in the config.pro file located in {ProE load point}\text (see Figure 2)

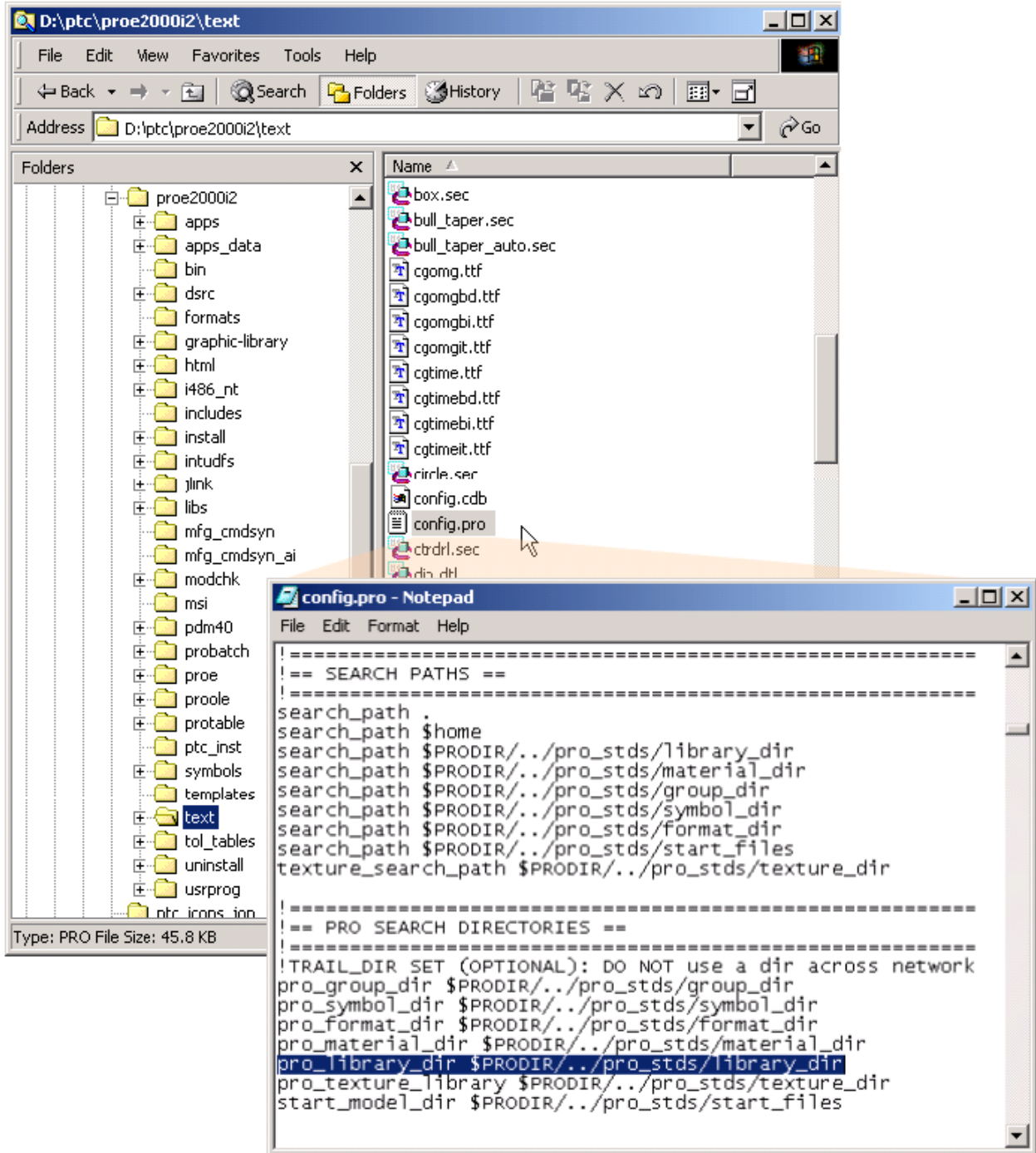


Figure 2 – Set the Config.pro Option, PRO_LIBRARY_DIR

By modifying this config.pro file, Pro/Library will be available to every session of Pro/E. For cases where only one library is installed, set the config option PRO_LIBRARY_DIR to:

X:\ptc\pro_stds\library_dir\{specific library}

For example: **X:\ptc\pro_stds\library_dir\connlib**

Setup the Index Files to Work With Pro/Engineer

Index files (Figure 3), with extension **.mnu**, are used to list the different libraries and library files that are available from a Pro/E OPEN dialog box. By default, an index file is automatically installed with every library and should not need to be modified as long as the default folder name for each library is used. This is because the name of the index file for each library uses the corresponding default folder name.

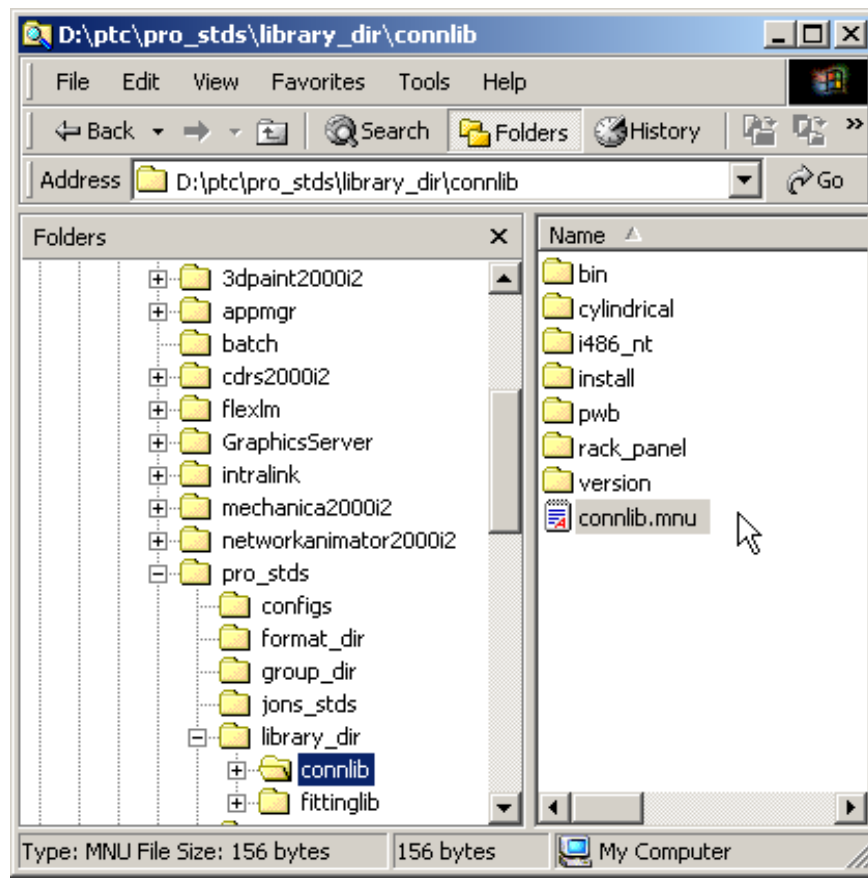


Figure 3 – Index File for Single Library Installation

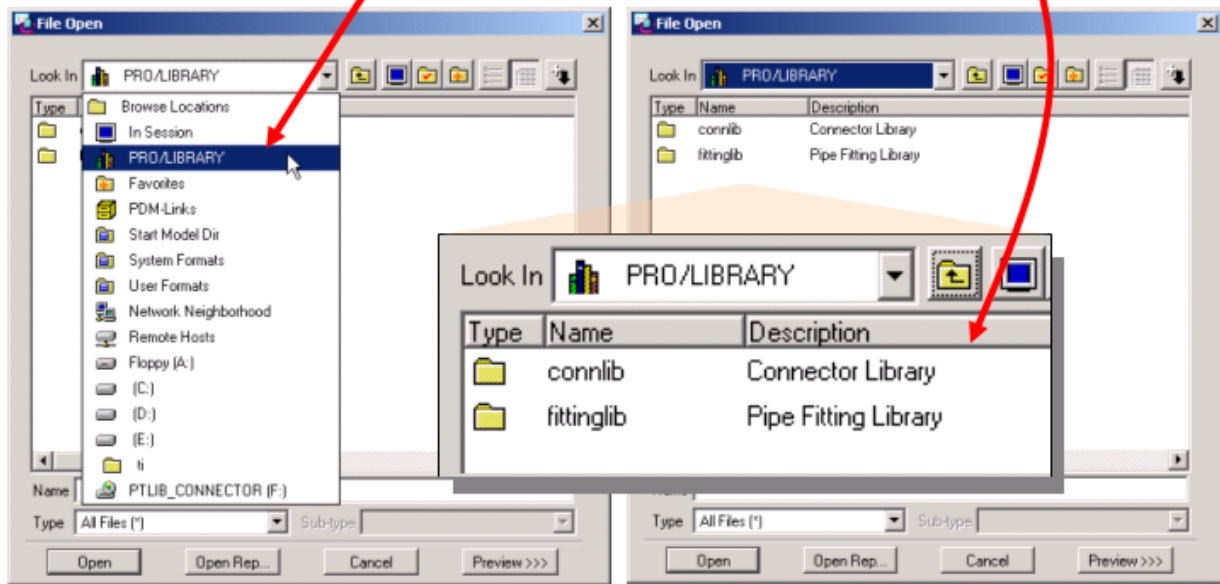
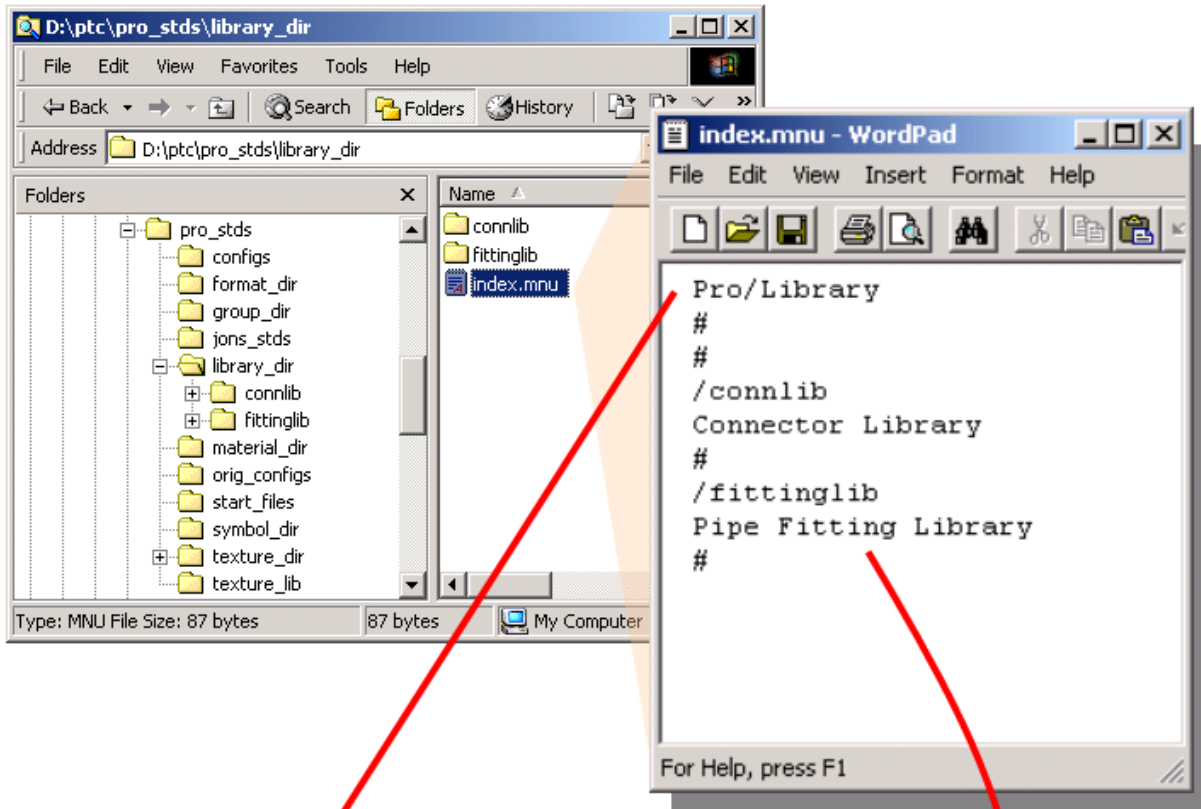
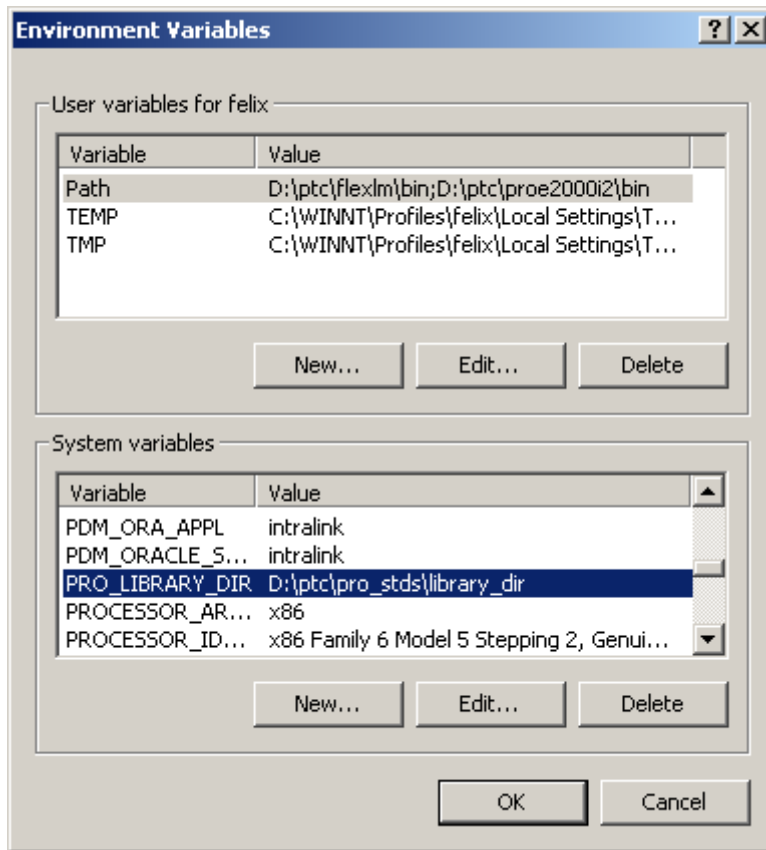


Figure 4 – Index Files for Multiple Library Installation

Create a Pro/Library Catalog



In order to be able to assemble Pro/Library parts to assemblies and retrieve them later, Pro/E needs to know where to look for each Pro/Library part. This is accomplished by cataloging the Pro/Library load point.

First set the environment variable **PRO_LIBRARY_DIR** to the Pro/Library load point (Figure 5). Then open a DOS window and change to the bin folder of any library and enter **pro_build_library_ctg** (Figure 6).

Figure 5 – Pro/Library Environment Variable


```
MS DOS
C:\>d:
D:\>cd ptc\pro_stds\library_dir\connlib\bin
D:\ptc\pro_stds\library_dir\connlib\bin>dir
Volume in drive D has no label.
Volume Serial Number is 9266-4089

Directory of D:\ptc\pro_stds\library_dir\connlib\bin

06/08/2000  10:49a    <DIR>          .
06/08/2000  10:49a    <DIR>          ..
06/08/2000  09:57a    <DIR>          alpha
06/08/2000  09:57a    <DIR>          i486_95
06/08/2000  09:57a    <DIR>          i486_nt
09/01/1998  07:16a           2,043 mkconnconfig_nt.bat
09/01/1998  07:16a           3,360 mkconnconfig_unix
06/08/2000  09:57a           1,452 pro_build_library_ctg.bat
              3 File(s)              6,855 bytes
              5 Dir(s)    2,778,124,288 bytes free

D:\ptc\pro_stds\library_dir\connlib\bin>pro_build_library_ctg
D:\ptc\pro_stds\library_dir\connlib\bin>
```

Figure 6 - Pro/Library Catalog Utility

Also, if only one library is installed, no configuration is needed. For multiple libraries, an **index.mnu** file is needed inside the Pro/Library load point which lists both the names and descriptions of each installed library. **Figures 7 & 8** show how and where to create this file.



Once the command is executed, a catalog file is created and is

Figure 7 – Location of Pro/Library Catalog

from any library bin folder.

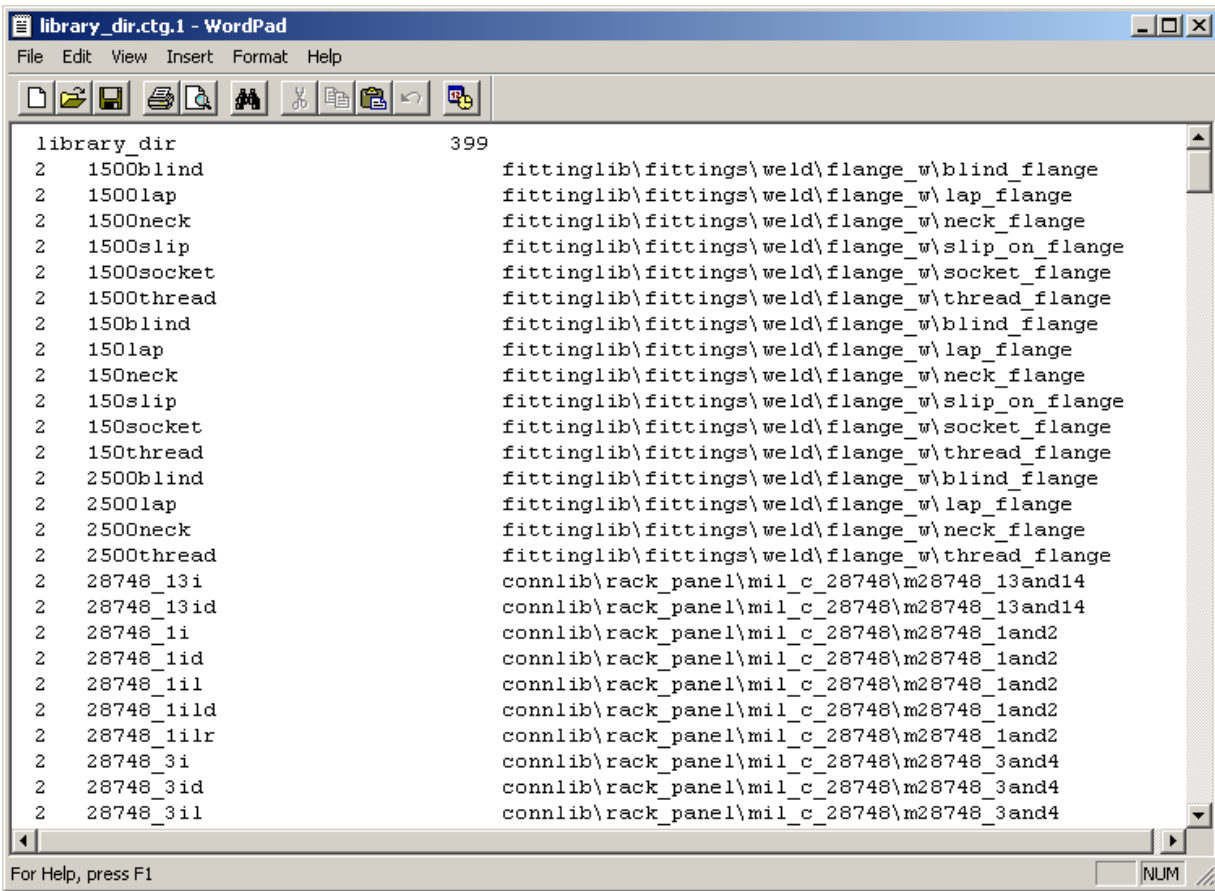


Figure 8 – Pro/Library Catalog

Upcoming Events and Training Class Schedules

Education Services Course Schedules for San Jose

For prerequisites see the course description

Start Date	Course Title	Location	Registration Info
2001 09/24	Introduction to Pro/ENGINEER	San Jose (CA)	Request Registration
2001 09/24	Introduction to Pro/ENGINEER	San Jose (CA)	Request Registration
2001 09/24	Fundamentals of Drawing	San Jose (CA)	Request Registration
2001 10/01	Introduction to Pro/ENGINEER	San Jose (CA)	Request Registration

2001 10/01	Introduction to Pro/ENGINEER	San Jose (CA)	Request Registration
2001 10/01	Introduction to Windchill	San Jose (CA)	Request Registration
2001 10/03	Administer the Windchill Business Environment	San Jose (CA)	Request Registration
2001 10/05	Core Pro/ENGINEER Release 2001 Update	San Jose (CA)	Request Registration
2001 10/08	Pro/DESIGNER Industrial Design Basic Training	San Jose (CA)	Request Registration
2001 10/08	Pro/DIAGRAM Training	San Jose (CA)	Request Registration
2001 10/08	Fundamentals of Pro/MECHANICA Structure/Thermal Training	San Jose (CA)	Request Registration
2001 10/10	Cable Harness Design and Manufacturing Training	San Jose (CA)	Request Registration
2001 10/15	Introduction to Pro/ENGINEER	San Jose (CA)	Request Registration
2001 10/15	Fundamentals of Design	San Jose (CA)	Request Registration
2001 10/16	Create and Customize Windchill Applications	San Jose (CA)	Request Registration
2001 10/22	Pro/INTRALINK Administrator Training	San Jose (CA)	Request Registration
2001 10/22	Introduction to Pro/ENGINEER	San Jose (CA)	Request Registration
2001 10/22	Advanced Top Down Design	San Jose (CA)	Request Registration
2001 10/24	Fundamentals of Sheetmetal Design	San Jose (CA)	Request Registration
2001 10/29	Introduction to Pro/ENGINEER	San Jose (CA)	Request Registration
2001 10/29	Designing With Surfaces	San Jose (CA)	Request Registration
2001 10/29	Fundamentals of Pro/MECHANICA Motion Training	San Jose (CA)	Request Registration
2001 11/01	Interactive Surface Design in Pro/ENGINEER	San Jose (CA)	Request Registration
2001 11/01	Pro/MECHANICA Advanced Workshop	San Jose (CA)	Request Registration
2001 11/05	Pro/INTRALINK User Training	San Jose (CA)	Request Registration
2001 11/05	Drawing for Designers	San Jose (CA)	Request Registration

		(CA)	Registration
2001 11/05	Mechanism Analysis in Pro/ENGINEER	San Jose (CA)	Request Registration
2001 11/06	Consistent Innovation with Behavioral Modeling	San Jose (CA)	Request Registration
2001 11/07	Pro/ENGINEER System Administration Training	San Jose (CA)	Request Registration
2001 11/08	Pro/PROCESS for Assemblies	San Jose (CA)	Request Registration
2001 11/08	Adding Motion to Assemblies	San Jose (CA)	Request Registration
2001 11/12	Introduction to Pro/ENGINEER	San Jose (CA)	Request Registration
2001 11/12	Advanced Rounds	San Jose (CA)	Request Registration
2001 11/12	Introduction to Windchill	San Jose (CA)	Request Registration
2001 11/14	Administer the Windchill Business Environment	San Jose (CA)	Request Registration
2001 11/14	Pro/DESKTOP Training	San Jose (CA)	Request Registration
2001 11/19	Pro/PIPING Training	San Jose (CA)	Request Registration
2001 11/19	Large Assembly Management	San Jose (CA)	Request Registration
2001 11/19	ProductView Fundamentals	San Jose (CA)	Request Registration
2001 11/20	Core Pro/ENGINEER Release 2001 Update	San Jose (CA)	Request Registration
2001 11/26	Introduction to Pro/ENGINEER	San Jose (CA)	Request Registration
2001 11/26	Fundamentals of Pro/MECHANICA Structure/Thermal Training	San Jose (CA)	Request Registration
2001 11/27	Create and Customize Windchill Applications	San Jose (CA)	Request Registration
2001 12/03	Pro/INTRALINK Administrator Training	San Jose (CA)	Request Registration
2001 12/03	Introduction to Pro/ENGINEER	San Jose (CA)	Request Registration
2001 12/03	Fundamentals of Design	San Jose (CA)	Request Registration
2001 12/10	Fundamentals of Drawing	San Jose (CA)	Request Registration

2001 12/10	Introduction to Windchill	San Jose (CA)	Request Registration
2001 12/10	CE/TOL 6sigma Basic Training	San Jose (CA)	Request Registration
2001 12/12	Administer the Windchill Business Environment	San Jose (CA)	Request Registration
2001 12/17	Introduction to Pro/ENGINEER	San Jose (CA)	Request Registration
2001 12/17	Fundamentals of Sheetmetal Design	San Jose (CA)	Request Registration
2001 12/17	Designing With Surfaces	San Jose (CA)	Request Registration



PTC Weekly Email – San Jose
Monday September 17, 2001

Note: This weekly PTC email will continue to be used for the following:

- 1) Inform you on events related to PTC products. (user groups, conferences, training schedules, etc.)**
- 2) Educate you on products that are available at PTC**
- 3) Tips and Techniques using PTC products**

These messages will be distributed via email. If you wish to subscribe, send an email to mbriscoe@ptc.com and type SUBSCRIBE in the subject line. If you wish to be removed from future mailings type REMOVE in the subject line.

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