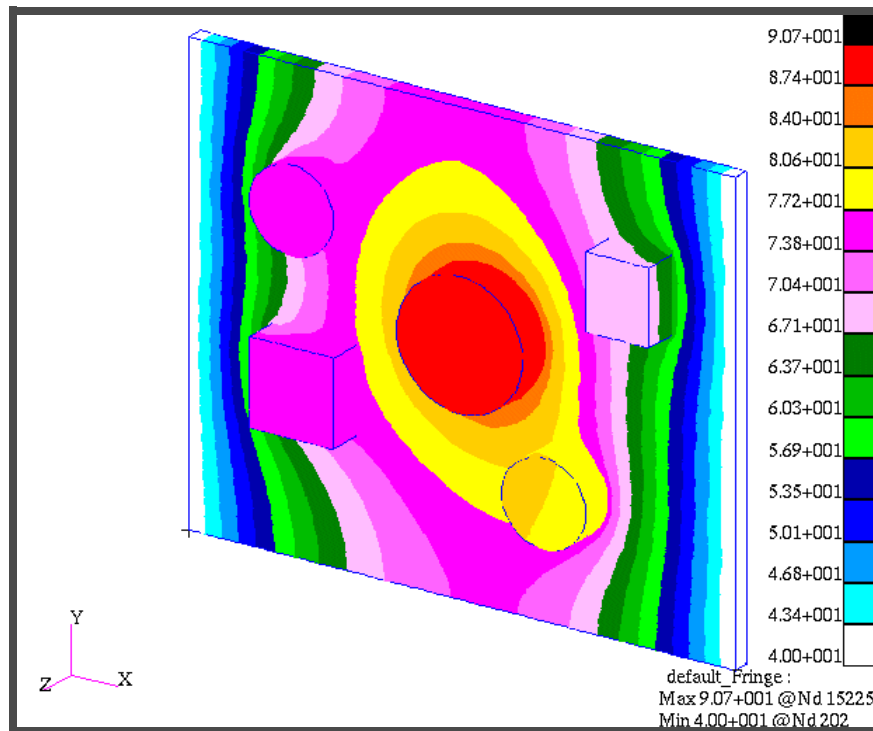


APPENDIX D

Create Group and List



Objectives:

- Read in the Patran session file.



Suggested Exercise Steps:

- Create a new database and name it **pwb.db**.
- Read in a session file called **pwd1.ses**
- Click on the Analysis toggle in the Main window: Analyze-Entire Model-Full run: Job name is pwb.
- When the job is completed, you can read in the XDB results. PATRAN version 9 now support XDB file by default.
- Attach XDB –Result entities-local: select the pwb.xdb.
- Click on the Results toggle, and create-quick plot-and select the temperature results.



Exercise Procedure:

1. Open a new database and name it **pcb.db**.

File/New...*New Database Name***pcb****OK**

In the New Model Preferences form set the following:

New Model Preference*Tolerance*◆ **Default***Analysis Code:***MSC/NASTRAN***Analysis Type:***Thermal****OK**

Whenever possible click **Auto Execute** (turn off).

2. Read in the session file called **pcb1.ses** and play it.

File/Session/Play...*Play from file***pcb1****Apply**

3. Click on the **Analysis** radio button on the **Top Menu Bar** and complete the entries as shown here:.

◆ **Analysis***Action:***Analysis***Object:***Entire Model***Method:***Full Run***Job Name***pwb****Apply**

An MSC.Nastran input file called **fin.bdf** will be generated. This process of translating your model into an input file is called the Forward Translation. The Forward Translation is complete when the Heartbeat turns green.

Submitting the Input File for Analysis:

4. Submit the input file to MSC.Nastran for analysis.
 - 4a. To submit the MSC.Patran **.bdf** file, find an available UNIX shell window. At the command prompt enter **nastran fin.bdf scr=yes**. Monitor the run using the UNIX **ps** command.
 - 4b. To submit the MSC.Nastran **.dat** file, find an available UNIX shell window and at the command prompt enter **nastran fin scr=yes**. Monitor the run using the UNIX **ps** command.
5. When the run is completed, edit the **fin.f06** file and search for the word **FATAL**. If no matches exist, search for the word **WARNING**. Determine whether existing **WARNING** messages indicate modeling errors.

6. **MSC.Nastran Users have finished this exercise. MSC.Patran Users should proceed to the next step.**

7. Proceed with the Reverse Translation process, that is, attaching the fin.xdb results file into MSC.Patran. To do this, return to the Analysis form and proceed as follows:

◆ **Analysis**

<i>Action:</i>	Attach XDB
<i>Object:</i>	Result Entities
<i>Method:</i>	Local
Select Result File...	
<i>Select Result File</i>	pwb.xdb
OK	
Apply	

8. When the translation is complete and the Heartbeat turns green, bring up the **Results** form.

Choose the **Default** result case, and plot the result by selecting **Temperature** in the Select Fringe Result.

◆ **Results**

<i>Action:</i>	Create
<i>Object:</i>	Quick Plot
<i>Select Results Cases</i>	Default
<i>Select Fringe Result</i>	Temperature
Apply	

9. Create a group named **new_85**.

Group/Create...

<i>Action:</i>	Create
<i>New Group Name</i>	new_85
	<input checked="" type="checkbox"/> Make Current
Apply	

Tools/List/Create...

<i>Model:</i>	<input type="text" value="FEM"/>
<i>Object:</i>	<input type="text" value="Element"/>
<i>Method:</i>	<input type="text" value="Attribute"/>
<i>Attribute</i>	<input type="text" value="Fringe Value"/>
<i>TOL-FRI</i>	<input type="text" value="0.005"/>
<i>F</i> <input type="text" value=">"/>	<input type="text" value="85"/>
<i>Target List</i>	<input type="checkbox"/> "A"

List A

<i>Existing Groups</i>	<input type="text" value="new_85"/>
<i>Group Name</i>	<input type="text" value="new_85"/>

Group/Create...

<i>Action:</i>	<input type="text" value="Create"/>
<i>New Group Name</i>	<input type="text" value="other_than_85"/>
	<input checked="" type="checkbox"/> Make Current

Tools/List/Create...

<i>Model:</i>	<input type="text" value="FEM"/>
<i>Object:</i>	<input type="text" value="Element"/>

Method:

Attribute

Attribute

Material

Existing Materials

**Epoxy_glass_board
bondline
chip**

Target List

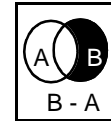
◆ **“B”**

Apply

List A

Add to Group

Operation:



Add to Group

Existing Groups

other_than_85

Group Name

other_than_85

Apply

Group/Create...

Action:

Create

New Group Name

components

Make Current

Apply

Group/Create...

Action:

Create

New Group Name

thermal_grease

Make Current

Group/Create...

Action:

New Group Name

Make Current

Tools/List/Create...

Model:

Object:

Method:

Attribute

Existing Materials

Target List

◆ "A"

Before you click the Apply button, you should click on the Clear button in the List A form. This is to make sure that List A does not have any existing elements.

Once you have done that, then you click on the Apply on the Create List menu, this will create the following elements on the List A form.

List A

List Save

Existing Groups

Group Name

components

Apply

Display/Entity Color/Label/Render...

Target Group(s)

components

Render Style:

Shaded/Smooth

Apply

Display/Entity Color/Label/Render...

Target Group(s)

pcb

Render Style:

Shaded/Smooth

Apply

Group/Post...

Action:

Post

Select Group to Post

**Components
pcb**

Apply