

SMAP Version 6.58 Update Note

December 30, 2009

1. **PLOT-3D (SMAP Post-processing program)**

PLOT-3D includes the following new features:

- **Specifying Material Based Contour Plots.**

Material based contour plots are used to make a separate stress interpolation for those materials which are much stiffer than the surrounding materials.

"MatBasedContour.Dat" in Working Directory contains the following input data:

Number of Continuum Materials For Separate Interpolation

Listing of Continuum Material Numbers

Flag For Reference Lines For 3D Contour Plot (0 for No, 1 for Yes)

Number of Nodes For Reference Lines

Listing of Reference Node Numbers

Example Input Data:

3

4 5 6

1

5

1 2 3 4 5

The above input data states that continuum material numbers 4, 5, and 6 are interpolated separately and reference lines connecting nodes 1, 2, 3, 4, and 5 are added for 3D contour plot.

- **Keeping the Splitted Files.**

To keep the splitted files in Sub Working Directory, follow the following procedures:

In PLOT-3D, select Plot-> Existing View and then click "Save" button.

When you get back to PLOT_2D_3D in Plot Menu, check the check box to skip the data processing for splitted files.

- **Default Material Colors.**

Following "Repeating" default material colors are assigned:

Green	for Material No 1
Medium Blue	for Material No 2
Light Blue	for Material No 3
Yellow	for Material No 4
Light Yellow	for Material No 5
Light Red	for Material No 6
Light Purple	for Material No 7
Medium Gray	for Material No 8
Light Gray	for Material No 9
White	for Material No 10

Thereafter the above 10 colors are repeating.

- **Deformed Shape With Material Colors.**

Now deformed meshes are plotted with material colors by selecting "Visible Surfaces with Material Color" in Mesh Plot window.

- **More Clear Node Numbers and Boundary Codes.**

Node numbers and boundary codes are shown more clearly.

- **Improved JOINT-2D/3D Pre-processing Programs.**

JOINT-2D/3D includes Inner Beam/Shell and outer Beam/Shell element. Refer to Updated JOINT-2D/3D User's Manual.

- **Directly Accessing PLOT-3D Program.**

PLOT-3D is used so many times to show the Mesh Files and Graphical Results from SMAP programs. Thus, it is useful to copy the following Shortcut File on Desktop screen of your computers and thereafter to access PLOT-3D directly by clicking the Shortcut on Desktop:

C:\SMAP\CT\CTMENU\Shortcut to PLOT3D.exe

2. **AIG (ADDRGN-2D Input GUI)**

AIG includes the following new improvements:

- **Increasing Maximum Number of Blocks for Base Mesh.**

Now the maximum number of horizontal/vertical blocks is extended to 16.

- **Editing AIG Input File by Text Editor.**

Experienced users can edit AIG input files directly by Ascii Text Editors.

3. **ADDRGN-2D / ADDRGN-3D Preprocessing Programs**

ADDRGN-2D/ADDRGN-3D includes the following new features:

- **Using Region B Coordinates and Boundary Codes Along the Interface.**

Specifying "IMOD = -1" is the same as "IMOD = 0" except that along the interface coordinates and boundary codes of Region B mesh are used.

4. **Debugging Main Processor of SMAP Programs.**

- **Including Element Level Operation for Debugging Information.**

"Debug.dat" in c:\smap\ct\ctdata includes NELDEB.

Where

NELDEB = -1 : Do not print element information in element level operation.

= 0 : Print current element number in element level operation.

> 0 : Print debug information for element number NELDEB in element level operation.

JOINT-2D User's Manual

December 30, 2009

Card Group	Input Data and Definitions
General Information	<p>1.1 Title</p> <p>Title Any title of up to 80 characters</p>
	<p>1.2 AllJoint</p> <p>AllJoint = 0 Generate Joint Elements along the all interfaces between continuum elements. Cards 2, 3, and 4 are not used.</p> <p> = 1 Generate Joint Elements for the material numbers of continuum elements as specified in Cards 2 and 3. Card 4 is not used.</p> <p> = 2 Generate Joint Elements for the element surface numbers of continuum elements as specified in Card 4. Cards 2 and 3 are ignored.</p> <p>Note 1 : To run JOINT-2D, select SMAP-2D → Setup → PLOT_2D.3D and then specify the "Joint Thickness" which is greater than 0 (Ex. Joint Thickness = 0.1) and Input File "Joint.inp" should exist in the Working Directory.</p> <p>Note 2 : Output File "JointedBlock.Mes" contains only Continuum and Joint Element.</p>

Card Group	Input Data and Definitions																
AllJoint = 1	Internal Joint Generation	<p>2.1</p> <p>NumIJ, ThicIJ</p> <p>NumIJ Number of continuum materials for Internal Joint. If NumIJ = 0, go to Card Group 3.</p> <p>ThicIJ Thickness of Internal Joints</p>															
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-	-									

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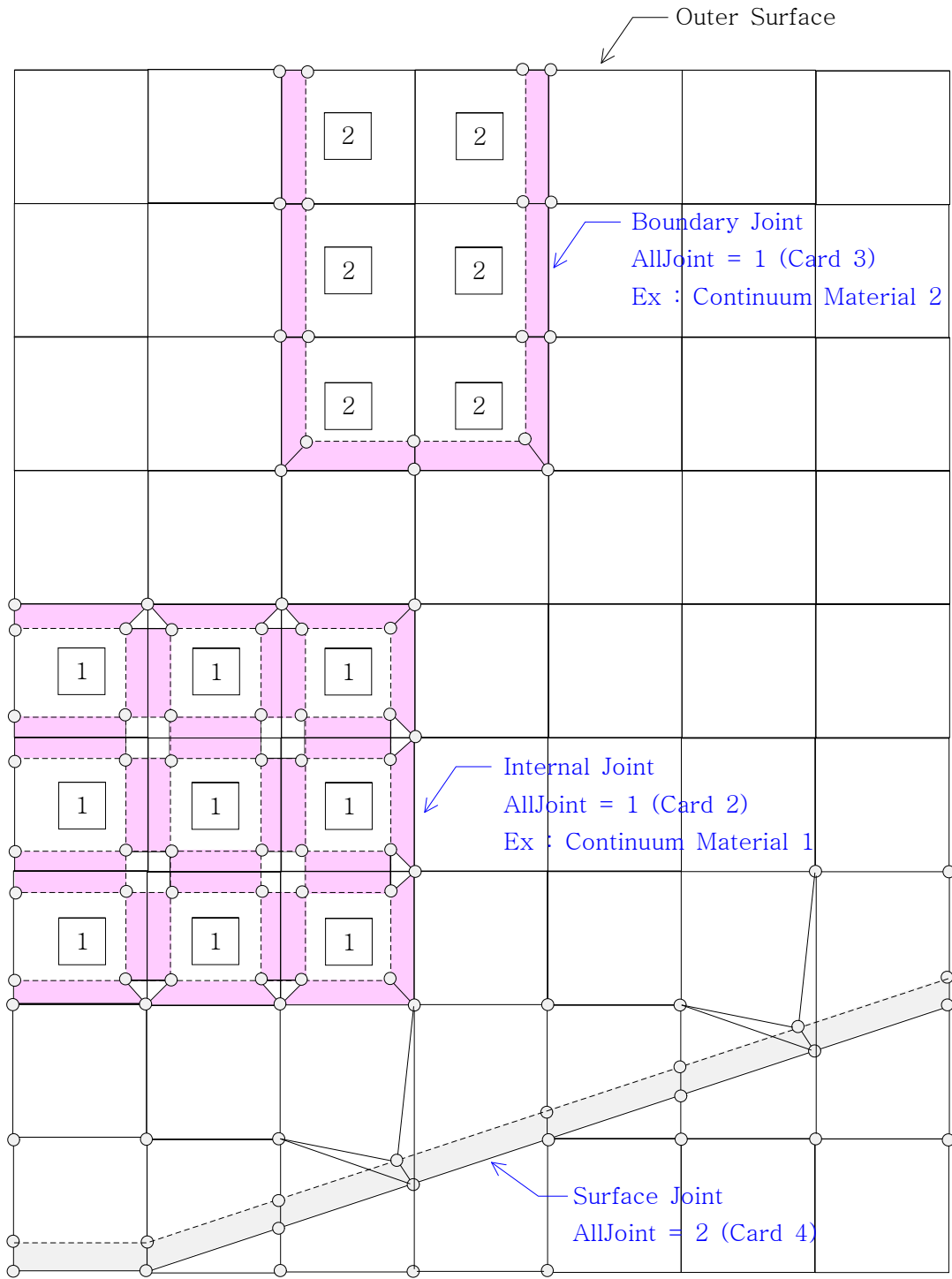


Figure 1. Internal, Boundary, and Surface Joint Generation

JOINT-3D User's Manual

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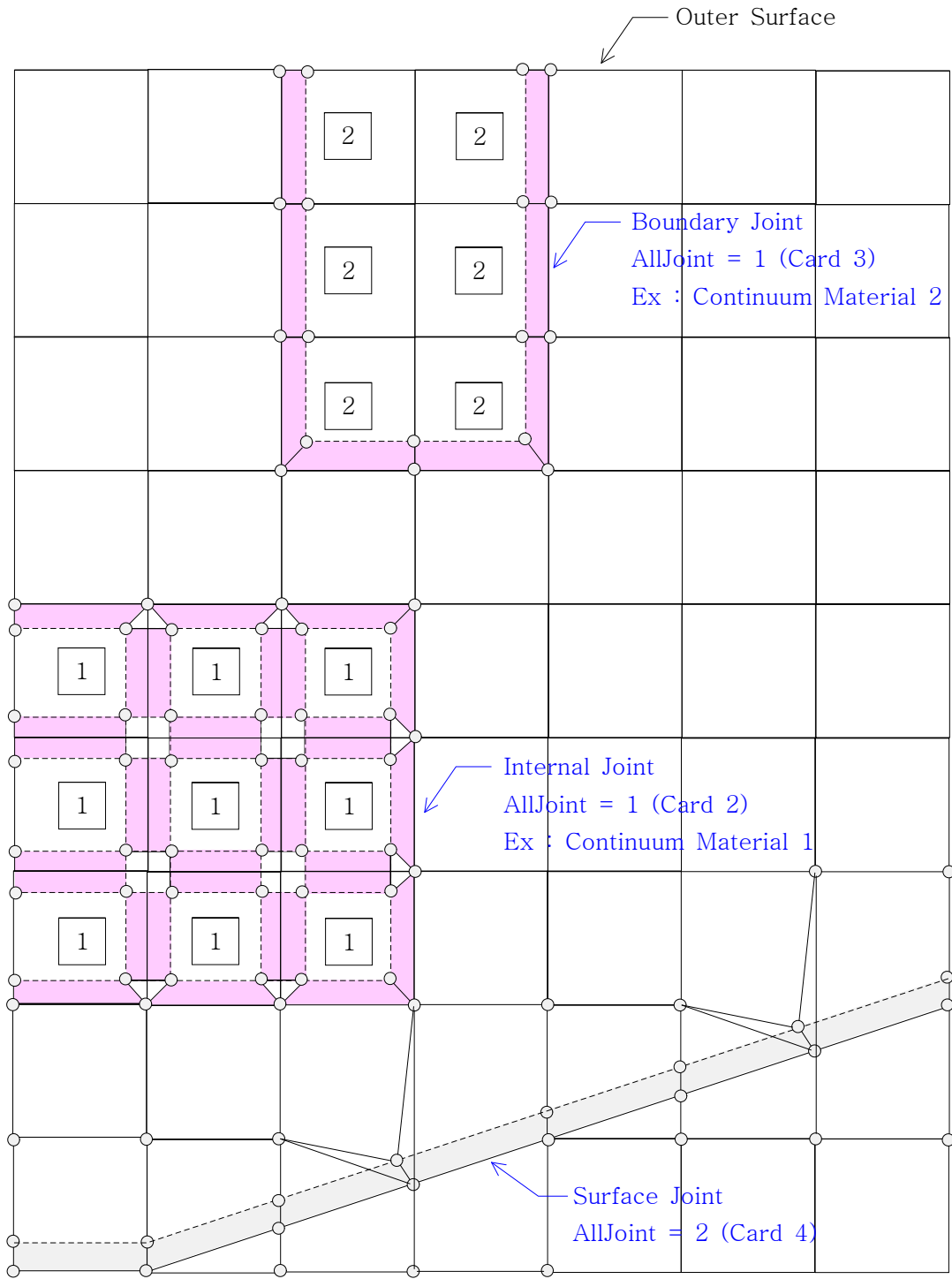


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