

Main Points in Bluebonnet Demo

- 8 **The copier as a copying expert.**
 - 9 **Obtains description of task from user.**
 - 9 **Decides how to do the task.**
 - 9 **Directs the performance of the task.**

- 8 **Describing task requires no knowledge of mechanical details of copier.**

- 8 **Display only questions relevant to the particular task.**

- 8 **Help user decide what he wants by describing:**
 - 9 **Functionality (e.g., stapling)**
 - 9 **Costs (e.g., two-sided copies)**
 - 9 **Restrictions (e.g., uncollated two-sided copies)**

- 8 **Procedure enabling conditions determine:**
 - 9 **Questions to ask,**
 - 9 **Legal tasks,**
 - 9 **Procedure to use.**

- 8 **Derivation rules define relationships among task features.**

- 8 **"Help Units" indicate actions for helping with illegal tasks.**

- 8 **Determines the procedure for a given task.**

- 8 **Provides instructions for doing the task.**
 - 9 **Includes purpose of step.**
 - 9 **Describes what copier is doing.**
 - 9 **Indicates assumptions.**

- 8 **Monitors progress of task.**
 - 9 **Notices when steps have already been done.**
 - 9 **Requests steps to be redone when needed.**

- 8 **Procedures are easy for designer to specify and allow flexible monitoring.**

Plan Generators for the 8200

One-Sided Originals to Two-Sided Copies

Enabling Condition:

#OfCopies > 0 AND #OfOriginalImages > 0 AND InputProcessor = 'RDH' AND
 OriginalTooThick = 'No' AND TwoSidedOriginals = 'No' AND
 TwoSidedCopies = 'Yes' AND Collate = 'Yes' AND
 (Staple = 'No' OR CopiesTooThickToStaple = 'No')

Parameters:

CopyBrightness CopiesOnStandardPaper #OfCopies Reduction Staple

One-Sided Originals to One-Sided Copies

Enabling Condition:

#OfCopies > 0 AND #OfOriginalImages > 0 AND InputProcessor = 'RDH' AND
 OriginalTooThick = 'No' AND TwoSidedOriginals = 'No' AND
 TwoSidedCopies = 'No' AND (Staple = 'No' OR Collate = 'Yes') AND
 (Staple = 'No' OR CopiesTooThickToStaple = 'No')

Parameters:

Collate CopyBrightness CopiesOnStandardPaper #OfCopies Reduction Staple

Bound Original Where No Master is Needed

Enabling Condition:

#OfCopies > 0 AND #OfOriginalImages > 0 AND
 (InputProcessor = 'BDA' OR InputProcessor = 'Glass') AND
 (#OfCopies = 1 OR Collate = 'No') AND TwoSidedCopies = 'No' AND
 Staple = 'No'

Parameters:

CopyBrightness CopiesOnStandardPaper #OfCopies Reduction Staple

Bound Original Where a Master is Needed

Enabling Condition:

#OfCopies > 0 AND #OfOriginalImages > 0 AND
 (InputProcessor = 'BDA' OR InputProcessor = 'Glass') AND
 [(#OfCopies > 1 AND Collate = 'Yes') OR TwoSidedCopies = 'Yes' OR
 (Staple = 'Yes' AND Collate = 'Yes' AND CopiesTooThickToStaple = 'No')]

Parameters:

Collate CopyBrightness CopiesOnStandardPaper CopiesTooThickToStaple #OfCopies
 Reduction Staple TwoSidedCopies

Originals Too Thick For RDH

Enabling Condition:

```
#OfCopies > 0 AND #OfOriginalImages > 0 AND InputProcessor = 'RDH' AND
OriginalTooThick = 'Yes' AND Staple = 'No' AND
(TwoSidedCopies = 'No' OR Collate = 'Yes')
```

Parameters:

```
Collate CopyBrightness CopiesOnStandardPaper #OfCopies Reduction TwoSidedCopies
TwoSidedOriginals
```

Two-Sided Originals to Two-Sided Copies

Enabling Condition:

```
#OfCopies > 0 AND #OfOriginalImages > 0 AND InputProcessor = 'RDH' AND
OriginalTooThick = 'No' AND TwoSidedOriginals = 'Yes' AND
TwoSidedCopies = 'Yes' AND Collate = 'Yes' AND Staple = 'No' AND
(Staple = 'No' OR CopiesTooThickToStaple = 'No')
```

Parameters:

```
CopyBrightness CopiesOnStandardPaper #OfCopies Reduction Staple
```

Two-Sided Originals to One-Sided Copies Where a Master is Required

Enabling Condition:

```
#OfCopies > 0 AND #OfOriginalImages > 0 AND InputProcessor = 'RDH' AND
OriginalTooThick = 'No' AND TwoSidedOriginals = 'Yes' AND
TwoSidedCopies = 'No' AND Collate = 'Yes' AND
[#OfCopies > 1 OR (Staple = 'Yes' AND CopiesTooThickToStaple = 'No')]
```

Parameters:

```
CopyBrightness CopiesOnStandardPaper #OfCopies Reduction Staple
```

Two-Sided Originals to One-Sided Copies Where a Master is Not Required

Enabling Condition:

```
#OfCopies > 0 AND #OfOriginalImages > 0 AND InputProcessor = 'RDH' AND
OriginalTooThick = 'No' AND TwoSidedOriginals = 'Yes' AND
TwoSidedCopies = 'No' AND Staple = 'No' AND
(#OfCopies = 1 OR Collate = 'No')
```

Parameters:

```
CopyBrightness CopiesOnStandardPaper #OfCopies Reduction
```

Derivation Rules for the 8200

8 (OriginalsBound = 'Yes' AND Unbindable = 'No') IMPLIES
InputProcessor = 'BDA'.

(i.e., use the BDA for originals that are bound and not unbindable.)

8 {(OriginalsOnStandardPaper = 'Yes' OR OriginalsPaperTooFragileOrThick = 'No') AND
[OriginalsStandardSize = 'Yes' OR
(OriginalsTooLarge = 'No' AND OriginalsTooSmall = 'No')]} AND
(OriginalsBound = 'No' OR Unbindable = 'Yes')} IMPLIES
InputProcessor = 'RDH'.

(i.e., use the RDH for unbound or unbindable originals that are not too fragile, too thick, too large, or too small.)

8 (OriginalsBound = 'No' OR Unbindable = 'Yes') AND
{[OriginalsStandardSize = 'No' AND (OriginalsTooSmall = 'Yes' OR
OriginalsTooLarge = 'Yes')]} OR
(OriginalsOnStandardPaper = 'No' AND
OriginalsPaperTooFragileOrThick = 'Yes')} IMPLIES
InputProcessor = 'Glass'.

(i.e., use the glass for unbound or unbindable originals that are either too small, too large, too fragile, or too thick for the RDH.)

8 (InputProcessor = 'BDA' OR InputProcessor = 'Glass') IMPLIES TwoSidedOriginals =
'No'.

(i.e., consider originals to be one sided when using the glass or BDA.)

8 IF #OfCopySheets > 35 THEN CopiesTooThickToStaple = 'Yes' ELSE
CopiesTooThickToStaple = 'No'.

(i.e., copies are too thick to be stapled by the 8200 if they have more than 35 sheets.)

8 IF (#OfOriginalImages > 50 AND TwoSidedOriginals = 'No') OR (#OfOriginalImages >
100 AND TwoSidedOriginals = 'Yes') THEN OriginalTooThick = 'Yes' ELSE
OriginalTooThick = 'No'.

(i.e., originals are too thick for the RDH if they have more than 50 images and are one-sided or they have more than 100 images and are two-sided.)

8 TwoSidedCopies = 'No' IMPLIES #OfCopySheets = #OfOriginalImages.

(i.e., the number of sheets in each one-sided copy will equal the number of images copied.)

8 TwoSidedCopies = 'Yes' IMPLIES #OfCopySheets = (#OfOriginalImages / 2).

(i.e., the number of sheets in each two-sided copy will equal 1/2 the number of images copied.)

8 OriginalsStandardSize = 'Yes' IMPLIES (OriginalsTooSmall = 'No' AND OriginalsTooLarge = 'No').

(i.e., standard size originals are not too small nor too large for the RDH.)

8 OriginalsOnStandardPaper = 'Yes' IMPLIES OriginalsPaperTooFragileOrThick = 'No'.

(i.e., originals on standard paper are not too fragile nor too thick for the RDH.)

8 NumberOfCopies = 1 IMPLIES Collate = 'Yes'.

(i.e., when only one copy is being made, consider it to be collated.)

"Help Units" for the 8200

8 (Collate = 'No' AND Staple = 'Yes').

Comment: The 8200 cannot staple uncollated copies. It can make unstapled copies, which you can then staple.

Action: Change Staple to 'No'.

8 (TwoSidedCopies = 'Yes' AND Collate = 'No').

Comment: The 8200 cannot make uncollated two-sided copies. It can make collated copies, which you can then uncollate.)

Action: Change Collate to 'Yes'.

8 (Staple = 'Yes' AND CopiesTooThickToStaple = 'Yes').

Comment: Your copies will be too thick for the 8200 to staple. It can make unstapled copies, which you can then staple.)

Action: Change Staple to 'No'.

8 (OriginalTooThick = 'Yes' AND
InputProcessor = 'RDH' AND
Staple = 'Yes').

Comment: The 8200 cannot staple copies of an original that is too thick for the RDH. It can make unstapled copies, which you can then staple.)

Action: Change Staple to 'No'.

8 ~(NumberOfCopies > 0).

Comment: Indicate number of copies desired.)

Action: None.

A Sample Procedure Produced by Bluebonnet

1-Sided to 1-Sided on Nonstandard Paper

Step 1: SetPanel.

Step 2: TellUser "Place the paper ... in the top paper tray".

Step 3: TellUser "Place originals in RDH".

Step 4: MakeReady.

Step 5: TellUser "Press Start". Requirements:

Panel Set (if not, try Step 1)
 "Add Paper" light off (if not, try Step 2)
 DocumentInRDH (if not, try Step 3)
 Ready State (if not, try Step 4)

Step 6: CompletePrintingStep. (sets CopiesMade) Requirements:
 Printing State (if not, try Step 5)

Step 7: TellUser "Remove paper from top paper tray".

Step 8: Select BottomPaperTray. Requirements:

"Add Paper" light on (if not, try Step 7)

Step 9: TellUser "Remove originals from RDH".

Step 10: TellUser "Remove copies from output tray".

Step 11: TellUser "Thank You. ... ". Requirements:

CopiesMade (if not, try Step 6)
 BottomPaperTray selected (if not, try Step 8)
 ~DocumentInRDH (if not, try Step 9)
 OffsettingCatchTrayEmpty (if not, try Step 10)
 Ready State (if not, try Step 4)