NOTE: This Technical Note has been retired. Please see the Technical Notes page for current documentation.

Technical Note PR08

PrGeneral Bug

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This technical note documents a bug in the implementation of the `PrGeneral` procedure in the LaserWriter driver version 4.0. The bug has to do with the format of the information returned by the `GetRslData` opcode. This technical note will also describe a workaround for the problem.

[Nov 01 1987]

Introduction

One of the opcodes supported by the `PrGeneral` procedure (Technical Note #128) is named `GetRslData`. The `GetRslData` operation initializes a resolution record that is of the following form:

```
    TRslRg = RECORD {used in TGetRslBlk}
        iMin:    Integer;    {0 if printer only supports discrete resolutions}
        iMax:    Integer;    {0 if printer only supports discrete
                                     resolutions}
    END;

    TRslRec = RECORD    {used in TGetRslBlk}
        iXRsl:    Integer;    {a discrete, physical X resolution}
        iYRsl:    Integer;    {a discrete, physical Y resolution}
    END;

    TGetRslBlk = RECORD {data block for GetRslData call}
        iOpCode:    Integer;    {input; = getRslDataOp}
        iError:     Integer;    {output}
        lReserved:    LongInt;    {reserved for future use}
        iRgType:    Integer;    {output; this declaration is for RgType1}
        XRslRg:     TRslRg;     {output; range of X resolutions}
        YRslRg:     TRslRg;     {output; range of Y resolutions}
        iRslRecCnt: Integer;    {output; how many RslRecs follow}
        rgRslRec:    ARRAY[1..27]
                OF TRslRec; {output; number used depends on printer type}
```

The LaserWriter 4.0 implementation has a bug that affects the `YRslRg` and `XRslRg` fields of the `TGetRslBlk` record. The correct values for the fields are:

```
        TGetRslBlk.XRslRg.iMin := 25;
        TGetRslBlk.XRslRg.iMax := 1500;
        TGetRslBlk.YRslRg.iMin := 25;
```

Unfortunately, the information returned by the LaserWriter 4.0 version of `PrGeneral` is:

```
    TGetRslBlk.XRslRg.iMin := 25;
    TGetRslBlk.XRslRg.iMax := 25;
    TGetRslBlk.YRslRg.iMin := 1500;
```

The recommended workaround for this problem is to use the `PrDrvrVers` function (*Inside Macintosh* II-163) to find out which version of the print driver you are using. If you are using 4.0, modify the resolution data before using it. The following code fragment illustrates this workaround:

```
PROCEDURE CheckRslRecord(VAR theRslRecord: TGetRslBlk);
CONST
    BogusDriver = 40;
BEGIN
    IF PrDrvrVers = BogusDriver THEN BEGIN
        theRslRecord.XRslRg.iMax := theRslRecord.YRslRg.iMax;
        theRslRecord.YRslRg.iMin := theRslRecord.XRslRg.iMin;
    END;
```

When the bug is fixed in a future version of the driver, the `CheckRslRecord` procedure will no longer have any effect on the resolution record. This will make sure your application gets the correct resolution data no matter which version of the driver is being used.

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