Sender: "Pamela←A.←Dick.osbunorth"@Xerox.COM
Date: 4 Jun 86 14:08:43 PDT (Wednesday)
Subject: Re: TypeFounder Beta-test report #1
From: XDESupport.osbunorth@Xerox.COM

The Typefounder folks had the following comments on 2 of your questions:

1. Re: The speed of dictionary font access decreases the 'deeper' in the dictionary the font is located:

Quite true. Unlike printer font dictionaries, structure of Viewpoint font dictionaries is such that to get to the nth font in the dictionary you have to start at the beginning of the file and work your way up. It would be possible take an initial pass through the file and build an index - this will be considered for future releases.

2. Re: Symptoms: If you start up the ToolDriver and TypeFounder in the correct order, use TypeFounder, then start a ToolDriver script, it fails. I found that you have to unload TypeFounder and start it fresh before using the ToolDriver. This appears to be due to TypeFounder's tool instances being numbered (i.e. Dictionary6) as they are created. This is more of an annoyance than a problem.

This is a bug related to improper handling of pop-up form subwindows (for example the 'Viewpoint Format Items' subwindow in the Dictionary tool). It will be fixed in the next release.

The next release of Typefounder will probably be included in the 5.0 release later this year.

Sender: "Pamela←A.←Dick.osbunorth"@Xerox.COM
Date: 6 Jun 86 10:16:55 PDT (Friday)
Subject: Re: Typefounder Beta-test Report #2
From: XDESupport.osbunorth@Xerox.COM

From the Typefounder Beta-test report #1:

1. We still don't have an answer to your question on the hor. and ver. resolution field. I will ask the Typefounder folks about this one again.

2. In regard to the problem of having to unload Typefounder before running a ToolDriver script it should be noted that this problem only (as far as we can tell) occurs with the Dictionary. You should be able to run scripts which do not use the Dictionary without having to unload Typefounder first.

3. Corrections have been made to the Tool.sws. ChangeWidths is actually a pop up window so its entry needs to remain. You can make the changes to the Tool.sws file directly, or we can send you another copy. The only changes were:
    1. add the [Distributor1], [Distributor2], and [Distributor3] fields with msgSW, cmdSW as parameters.
    2. remove the [PROMWriter1], [PROMWriter2], and [PROMWriter3] field entries.

4. The typos in the manual will be corrected for the next release.

From Typefounder Beta-test report #2:

1. I have submitted bug reports on using the contour editor of the Character subtool and fixing the typos in the Reference Manual. We'll get back to you when there is a change in status on bug reports.

2. I sent in your feature requests. The Typefounder folks thought that the UNDO key and the background grid ideas were both good and will add them to the proposed additions list.

Also, in response to the background grid idea:

This might be a good time to emphasize that Typefounder is not a very

good tool for drawing contour characters by hand. We feel it is more efficient to produce contours by scan-converting a high resolution raster master made from scanned-in artwork, or drawn with software (such Viewpoint Freehand Drawing) customized for doing illustrations. The knot editor in Typefounder is really designed for small touchups.

3. I haven't heard anything back yet on the request for displaying knots on a background image. I sent in this request later than the others, so they might not have had time to look at it yet.

Any progress on sending us the Camera Tool image which wasn't printing correctly? Thanks.

---Pam

By the by, XDESupport is moving to Sunnyvale on Monday. Our new phone number is (408) 737-4500, and our new address is:

525 Oakmead Parkway
Sunnyvale, CA 94086

Sender: "Pamela←A.←Dick.osbunorth"@Xerox.COM
Date: 18 Jun 86 15:01:54 PDT (Wednesday)
Subject: Re: TypeFounder Beta-test report #1
From: XDESupport.osbunorth@Xerox.COM

1. Re: Hor. Resolution' and 'Ver. Resolution' fields of a Print Service...

In ref. to your question about the Resolution fields of a Font, on page 31 of the 3.4 Reference Manual, in the fourth paragraph under Notes, use of the Vertical Resolution field for Character Set number is explained. The Hor. Resolution field of Print Service fonts contains a code describing the strikeout and underline positions for the font. We don't use it for that here. We use Hor. Resolution for the actual resolution in the fonts we make here and have never had problems installing them on the printer. I am going to try to find out the actual meaning of the Hor. Resolution field for Print Service fonts and will message you about it.

2. Re: If you start up the ToolDriver and TypeFounder in the correct order, use TypeFounder, then start a ToolDriver script, it fails. I found that you have to unload TypeFounder and start it fresh before using the ToolDriver. This appears to be due to TypeFounder's tool instances being numbered (i.e. Dictionary6) as they are created.

This is due to a bug in tool instance numbering. It will be fixed in the next release. Thanks for finding it!

3. Re: The Camera tool image did not print correctly; it appears as a broken raster when printed. A similar thing happen when capturing screen images in Viewpoint using 'Free Hand Drawing'. This may be related to my using a 6085 in both cases.

Looks like Camera Tool produces garbled images on a 6085 with a 19 inch display - we found an assumption of 1024 by 808 pixel display size in the code. This will be fixed shortly - probably as a safe-for-6085's Typefounder 3.5."

---Pam

Date: Thu 3 Jul 86 10:34:19-PDT
From: Christopher Lane <LANE@SUMEX-AIM.ARPA>
Subject: TypeFounder Beta-test Report #3
To: XDESupport.osbunorth@XEROX.COM

In regard to the 'X Resolution' field of the printer font, leaving it set to 300 worked fine. However, I did find the following algorithm for setting the 'X Resolution' field in "Appendix E: Obsolete Strikeout variation" in a Xerox Office Systems Division memo titled "Print Service Fonts":

```
    IF (syntheticUnderline THEN 10000 Else 0)
     + (delta-in-pixels from baseline to bottom of strikeout)*100
     + (thickness of strikeout in pixels)*10
```

If you divide the constants (10000, 100 and 10) by 10 you get an algorithm that seems to account for the values in the X Resolution field of the current printer fonts.

Sender: "Jeffrey←L.←Roberts.osbunorth"@Xerox.COM
Date: 7 Jul 86 09:42:18 PDT (Monday)
Subject: Re: TypeFounder Beta-test Report #3
From: JLRoberts.osbunorth@Xerox.COM

Re: Should it come up, who would we contact to be assigned character set numbers in the Xerox character code standard? My guess is that a small block of numbers would satisfy Stanford's needs for quite a while.

You should contact me with that request. I will act as your agent in submitting the request to the Xerox standards board. I assume that you want some unique character code assignments. Send me a list of the names of characters you would like added, including their graphic representations. You can mail it to me at

Attn: Jeff Roberts
Mail Stop SVHQ-802
Xerox Corporation
475 Oakmead Parkway
Sunnyvale, CA 94086

Jeff

Sender: "Larry←Rosenberg.osbunorth"@Xerox.COM
Date: 24 Jul 86 10:51:24 PDT (Thursday)
Subject: RE: TypeFounder Beta-test Report #4
From: XDESupport.osbunorth@Xerox.COM

Here are the developers' answers to your latest beta-test report.

Larry
==== ==== ==== ==== ==== ==== ==== ==== ====
QUESTION 1. Using the same script, files and steps (as far as I can tell) that I used to make working printer font dictionaries, some of the font dictionaries would cause the printer to crash during font cataloging. The backstop log for these crashes all had one of two entries:

July 15, 86 19:07:03 reason: address fault, pc: 25700B
gf: 143604B, module name: FontDictionaryBImpl
PSBIndex:0

July 15, 86 19:12:09 reason: address fault, pc: 637B
gf: 143604B, module name: FontDictionaryBImpl
PSBIndex:0

Given a font dictionary that didn't work, I would go back and change the sizes of a few of the fonts in by a mica (or two) and make the dictionary again and it would work. Going from a contour master to a printer dictionary, it seems that I should be able to specify any mica size (to the CONVERTER tool) and the font should be internally consistent and not crash the printer.

ANSWER 1. Any mica size should work, but it is important to remember that the print services software converts micas to points using a conversion factor of 72 points per inch, whereas Typefounder uses the international standard of 72.289 points per inch. We suggest specifying the size for the AC files in micas, using values found in the table in the "Printing Resolution Sizes" section of Appendix G of the Typefounder Reference Manual.

We have not experienced address faults cataloging fonts, nor are we experts on debugging print services software. If you want to supply XDESupport with the contour masters and a script that produces a font dictionary that crashes, we will forward them on to the developers who would try and reproduce the problem. If you do send anything, please make it clear that the developers are aware of this problem and have asked to see the scripts and the masters.

Question 2. It would be useful if the labels in the Typefounder tool windows were selectable in some way. After you've 'taught' Typefounder and are editing the script you may want to add another command that you left out while teaching (or are teaching an old script new tricks). Then you could go to, say the CONVERT tool, select the label for "Size in micas ' and have the COPY key insert "Size' in' micas' " into your script (the auto-quoting would help a lot too) possibly along with the tool name and sub-window information at the front.

ANSWER 2. Thats a nice idea, but XDE provides no way that we know of to select a form subwindow label, so I don't believe it is implementable. For now, it would probably be easiest to put Typefounder into 'teaching ToolDriver mode' long enough to make a script fragment containing the commands you need, and edit them in.

QUESTION 3. In the last stage of Typefounder starting, it prints 'Loading Typefounder tools...' and turns the cursor to an hour glass (waiting) cursor which doesn't seem appropriate as other tools on the screen are still active and can still make use of the (normal) cursor.

ANSWER 3. The hourglass cursor is deliberate, to discourage users from trying to create other tool windows while Typefounder is starting. There is a bug that can (if the timing is just right) cause an address fault when new windows receive a mouse action if they were created when Typefounder was loading its tools. The bug is still being worked on.

QUESTION 4. It seems that a typical operation you want to do is go from a contour master to a printer dictionary of standard sizes (say those listed on page 69). It would be nice if there was a tool that let you do this directly; the tool would have less flexibility than doing each step separately but would simplify this operation. This would also be useful when you are only testing out a particular font and aren't worried about minor irregularities. Possibly this tool could have some speed gains by reusing intermediate computations that get thrown away in the current font by font script approach.

ANSWER 4. Interesting idea, but we will probably not implement this. We find in practice that Converter parameters need to be set differently for different printing sizes, and that the current script mechanism provides this flexibility.

QUESTION 5. We discovered, by accident, that if your Interpress master requests a font that the 8046 printer doesn't have, but it does have one (exactly) 1/2 the requested size, it will scale up the smaller font to meet the request. I've never seen this documented anywhere; what document would describe this and other such 'features' of the printer?.

ANSWER 5. We have also discovered this by accident. The Print Service section of the System Administration Library makes no mention of it, and we don't know of other documentation.

QUESTION 6. The documentation for the CONVERTER tools mentions 'half-bitting' in a couple of places but doesn't mention why you would or wouldn't want to use it (whether it's useful for small or large fonts, etc.).

ANSWER 6. We'll add more information to the manual on when to use half-bitting. It's basic purpose is to provide an appearance compromise when ideal stroke widths are close to N.5 bits, where N is some small number. It is most often used in making the smaller sizes (6 to 14

points) of printer fonts, where it can smooth the progression of apparent color as point size changes. Heavy half-bitting is especially useful when the ideal cap stroke thickness is greater than the lower case stroke thickness.

QUESTION 7 At the bottom of page 73 in the manual, considering the step by step nature of the instructions, it seems there should be a step 5. involving using the 'Build Dictionary!' command since it jumps from entering the name of the font into the tool to writing a floppy.

ANSWER 7. We're trying to obtain a copy of the reference manual that went to Beta test users so we can check this reference.

QUESTION 8 If the last item in the list in the NextItemTool does not have an end-of-line character after it, it will not be selected correctly. I don't know if this is something that can be fixed or not but there should probably be a warning if it can't (if there isn't one already that I've missed).

ANSWER 8. This is a known bug in the 7 Aug 84 version of NextItemTool. We fixed it long ago, but forgot to propagate the new version (2 Aug 85) to the release directories. You will receive the fix in the next release of the Typefounder software.

QUESTION 9 When we were beta-testing the 1186 (Interlisp Dove) for XAIS last fall, they would periodically send out collections of the more significant bug/feature reports from the various beta-test sites so that we could limit redundancy and know what to keep an eye out for. It seems that this would be useful for the Typefounder beta-test, unless of course you wish to keep us isolated as part of the experiment!

ANSWER 9. Sounds reasonable; it's under consideration.

Sender: "Larry←Rosenberg.osbunorth"@Xerox.COM
Date: 24 Jul 86 11:23:22 PDT (Thursday)
Subject: Re: Typefounder knots problem
From: XDESupport.osbunorth@Xerox.COM

The developers responded to your problem deleting the wrong knot with:

The algorithm for determining closest knot runs through a list of all knots and picks the first one it finds that is within 6 screen pixels of the cursor hotspot. When knots are closely spaced, this may indeed not be the closest one to the hotspot. For now, we suggest increasing display scale until knot centers are more than 6 screen pixels (1/12 inch) apart.

Larry

Sender: "Holly←Wanless.osbunorth"@Xerox.COM
Date: 24 Jul 86 18:18:56 PDT (Thursday)
Subject: Re: TypeFounder Beta-test Report #5
From: XDESupport.osbunorth@Xerox.COM

There is no way to load printer fonts across the net; it must be done from floppy. This is because the NS Print Service uses access controls which will not allow you to store the font files into the protected SystemFiles directory where they must go. However, the Install From Floppy command bypasses these access controls. There is a 1983 memo that says you can load fonts from the net, but it was a specificaton that unfortunately was never implemented.

I don't know of any tools to make the Print Service more "open", as you put it. The Network Services have traditionally been a rather closed environment, and this has caused much frustration for the UG sites. Was there any particular function you had in mind (besides

being able to load fonts from somewhere other than floppies)?

I have forwarded your Typefounder questions to the implementors, and we should have answers from them shortly.

--Holly

Sender: "Holly←Wanless.osbunorth"@Xerox.COM
Date: 28 Jul 86 16:14:20 PDT (Monday)
Subject: Displaying background image knots
From: XDESupport.osbunorth@Xerox.COM

From the Typefounder developers:

Re: When using the Background subtool with the Character subtool contour editor, the background image doesn't display it's knots which would be useful (as an option). Even more useful would be the ability to merge a background contour into the foreground."

The background image will display its knots if you set background color to Black. Ability to merge a background contour into the foreground will be available in the next release.

--Holly

Sender: "Grant←Ruiz.osbunorth"@Xerox.COM
Date: 21 Oct 86 11:38:10 PDT (Tuesday)
Subject: Re: TypeFounder Beta-test Report #5
From: XDESupport.osbunorth@Xerox.COM

Many moons ago, you submitted a number of Typefounder questions which Holly immediately forwarded to our Typefounder implementors. Apparently they lost track of the questions until just recently. Since Holly is on vacation this week, I'm forwarding their responses to you. Hope you still find this interesting/informative.

Grant

Question: The manual doesn't explain about the implications of setting the 'Coding' field of the Font tool to the option ASCII (instead of the XC1 default). Does the 8046 printer accept such files? What are the file naming conventions (the Ascii equivalent of XC1-1-1)? What are the mapping differences? When do you use the Ascii coding? Etc.

Answer: The 'Coding' field of the Font tool affects only a very few things in Typefounder:

-- the substitution character used in writing Font Interchange Standard (FIS) format files - if coding is XC1 then it is that specified by the Xerox Character Coding Standard (360|312), otherwise 177.

-- the face code used in writing Prepress format (AC, SD, strike etc.) files. This code contains a Xerox/ASCII bit, which is set to Xerox if Coding is XC1, else to ASCII.

-- the searching of Prepress dictionaries for fonts that match a certain face (e.g. in the Font Window Extract command). The Xerox/ASCII bit is significant in determining if a match exists.

We are not sure if the 8046 printer would accept a file with the Coding set to ASCII, but suggest using a Coding of XC1 for font files that are to be used by Xerox devices.

Question: The ToolDriver appears to be set up to use fixed pitch fonts. If you set your default font to the TypeFounderScreen12.strike font, a variable pitch font, then the syntax error messages from the ToolDriver are mis-aligned. Typically the ToolDriver prints out the erroneous line and a line below it with an up-arrow pointing out the location of the syntax error. But with a variable pitch font, they

don't line up correctly.

I looked through the ToolDriver documentation but I didn't see any mention of whether you could set its font independently in the the User.cm file. If that is possible, it should probably be mentioned in the manual or included in the TypeFounderUser.cm example file. Otherwise possible fixes are make ToolDriver know about variable pitch fonts or make the TypeFounder screen font fixed pitch.

Answer: The unsupported tool FontMonster can be used to set the font in the ToolDriver window to a fixed pitch font which will make syntax error messages more readable. A good one to use is GACHA10.STRIKE from the UnsupportedFonts directory.

Question: Though the Ink and/or Shadow commands of the Variations tool work fine on the display, I was unable to get them to work with the printer when sending inked/shadowed test characters to the printer using the Proofer tool (I didn't actually make a font dictionary for the printer to test it). Does this actually work on the 8046 printer?

Are there any tools that make the Print Service more 'open', like the SystemFolder.bcd and Applize.bcd tools do for ViewPoint? It seems like a lot of the time we're fighting the printer's 'product hardening'.

Answer: The Proofer tool works without having to put a font dictionary on the printer. We are able to proof inked/shadowed test characters without any problem. Is it possible that the Proofer tool you used was a child of a different font window than the Variations tool's parent?

We agree that the product hardening of Print Services can make things difficult, and know of no tools that make it more open.