

INTER-OFFICE MEMO

To: R. HARTLEY - SALES

8 September 1966

From: J. V. COMISKEY

cc: NBingham  
ECGilbert  
JOssana  
JRobertson  
GSaltzer  
JWard

Subject: CUSTOMER MEETING ON COURIER FONT

Reference:

This meeting was held for the purpose of reviewing the printout results of the Courier Font and to arrive at a compromised redesign of the objectionable characters.

Present at the meeting were:

N. Bingham - G.E., Phoenix  
J. Ossanna - Bell Telephone Labs.  
J. Robertson -  
G. Saltzer - MIT  
J. Comiskey - Anelex  
R. Hartley - Anelex (Intermittent Attendance)

After a general discussion of the font, the following design decisions were made.

Lower Case Letters

- g - Raise the lower part of the body .002, lower the descender .003. (This change uses the maximum character space available. It would cause ghosting on 6-part paper. Under adverse tolerance conditions, it is possible that part of the descender may get clipped.)
- h - The body will be widened to an overall dimension of .070.
- i - The dot should be increased to .012 x .012.
- j - The dot should be increased to .012 x .012 and the heavy section of the land should be reduced from .008 to .006. The descender should be lowered .003.

- m - The character should be increased in width to .070. This dimension will apply from the foremost edge of the left-hand serif to the right-hand edge of the right leg. The serif on the right leg will remain .005 thereby making the overall width .075.
- p - Same treatment as g.
- q - Same treatment as g. In addition, the serif on the descender will extend an additional .0025 to the right. The left-hand portion of the serif will be shortened to the vertical centerline of the character.
- r - The right-hand section of the foot of the r will be shortened by .008.
- s - The angle formed by the horizontal centerline of the character and the land at the center will be reduced by 50%.
- t - The horizontal bar will be moved up .003 and the overall height of the character increased to .090.
- y - The descender will be lowered .003.

#### Capital Letters

- M - Overall width to be increased to .070.
- Q - The tail beneath the letter will be formed in the following manner. The horizontal portion will approximate a tilde with a dimension of .016 peak to peak. The length will be same as the current horizontal stroke. The tail will be lowered .003 and connected with the body of the letter by a slash extending from the left edge of the tilde to the current point of intersection on the body.

#### Special Characters

- # - (Number Sign) same as on courier wheel (Cat. No. 144-3).
- ! - (Exclamation Point) new character to print. Same as sample from IBM "golf ball" 015.
- " - (Double Quote) same as above.
- \$ - (Dollar Sign) same as above.
- % - (Percent Sign) same as on courier wheel (Cat. No. 153-5).
- & - (Ampersand) same as on courier wheel (Cat. No. 140-3).

- ' - (Accent. Acute) new character to printout as heavy as the printed lands of e and c. It will be slightly longer than that used on Anelex character printout sample 13. (Dwg. No. 52494, Cat. No. 148-4 and 5).
- ` - (Accent Grave) same as above.
- \* - (Asterisk) new character to print same as sample from IBM "golf ball" 015 and to be placed on the vertical centerline at the top of the character block.
- + - (Plus) should be engraved .070 x .070 and printout as bold as the sample from IBM "golf ball" 015. To be centered about the horizontal and vertical centerlines of the character block.
- - (Minus) should be .070 long on the horizontal centerline and printout as bold as the sample from IBM "golf ball" 015.
- = - (Equals) to be engraved .070 wide, centered about the horizontal centerline and printout as the sample from IBM "golf ball" 938.
- ,
- .
- (Comma) to look the same as the sample from IBM "golf ball" 015.
- (Period) same as on courier wheel (Cat. No. 145-19).
- / - (Slash) overall height to be .112 and overall width .070. It should print as bold as the sample from IBM "golf ball" 015. The slash should extend from the top right-hand corner of the character block to the lower left-hand corner which has been dropped to allow the .112 overall height. (It is imperative that no character extend above the character block formed by the numerals of the Courier Font. This limitation is imposed by the necessity of phasing the printing so that neither the tops of the numerals nor the bottoms of the lower case descenders get clipped during printing.)
- \ - (Reverse Slash) same as above but reversed.
- [ - (Left-Hand Bracket) to be .112 in overall height. Other dimensions to be same as Cat. No. 198-4. Same notes apply as for slash.
- ] - (Right-Hand Bracket) to be the reverse of above.
- ( - (Open Parenthesis) to be .110 high and shaped same as the sample from IBM "golf ball" 015. Note from slash applies.

- ) - (Close Parenthesis) to be reverse of above.
- : - (Colon) to be same as sample from IBM "golf ball" 015.
- ;
- > - (Greater Than) Cat. No. 159-4.
- < - (Less Than) Cat. No. 226-2.
- ? - (Question Mark) Cat. No. 156-6.
- @ - (At Sign) Cat. No. 151-6.
- }
- { - (Left-Hand Brace) same as above applying to Cat. No. 372-1.
- | - (Vertical Line) to be .012 high, designed and as bold as the slash. .112
- ^ - (Circumflex) to be located at the top of the character block. If placed over the engraved *small o* O, it should clear by .012. Overall width to be .050. The boldness should be compromised between the printed lower case letters and the vertical line.
- ' - (Accent Acute) should look like the comma in the semi-colon of the sample from IBM "golf ball" 938. The vertical center-line of the character block should pass through the center of this character.
- ` - (Accent Grave) should be reverse of above.  
NOTE - Apparently the above two characters duplicate the two characters following the ampersand. Unless informed to the contrary, the two following the ampersand will be deleted from this work schedule.
- ~ - (Tilde) this should be located at the top of the character block and be .070 wide. Peak-to-peak dimension to be as close to .015 as possible and still clear the engraved n by .012.
- (Underline) to be as wide as possible. Under the worst conditions, it could leave a white gap .020 wide when printing adjacent columns. Under the best conditions, the line could be continuous. To be on same level as lowest descenders.

*should clear e + o*

Anelex is to submit a standard quotation for designing the new characters and furnishing seven segments. G.E. will furnish an engraving sequence. Thirty-eight (38) new characters are involved.