

**XEROX**  
**BUSINESS SYSTEMS**  
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**XEROX SDD ARCHIVES**  
I have read and understood  
Pages \_\_\_\_\_ To \_\_\_\_\_  
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To: Charles Irby, Ralph Kimball, Richard Moore, Bill Bowman

From: Dave Smith / SD at Palo Alto

Subject: An idea for using the JDS "soft" keyboard  
also  
An argument for the vertical orientation of the 17" display

Filed on: [iris]<davesmith>star2>soft-keyboard.press

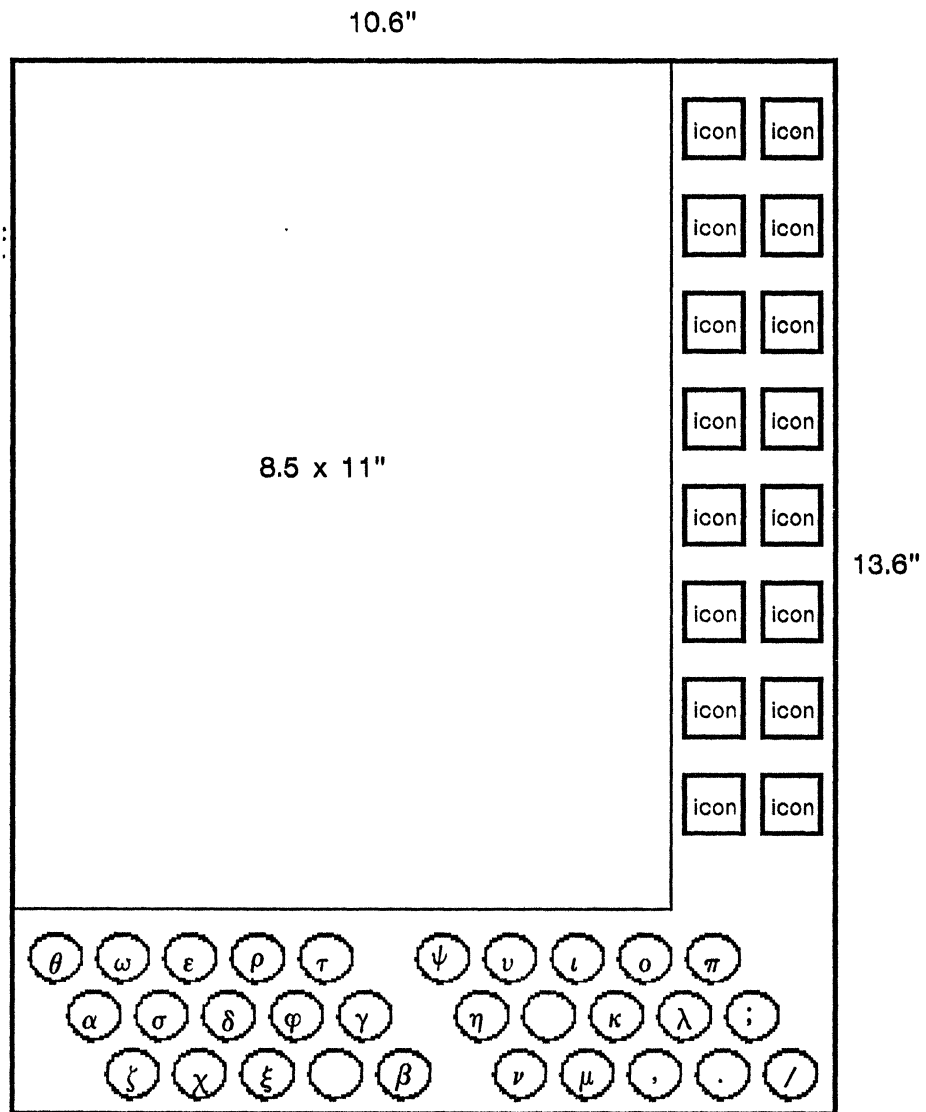
In several conversations with Bill Bowman over the past week, we have been exploring the idea of using a "soft" keyboard display to show non-standard keyboard mappings, as is done in the Japanese Document System. A "soft" keyboard is a mapping for the keyboard which is different than the labelling on the key tops, together, in the JDS scheme, with a visible display of the new mapping. Bill's motivation is that he would like to have (in an eventual Star release) ways to get graphical objects through the depressing of a single key. Such objects might be lines of different thicknesses, areas of different shadings, grids of different separations, etc. This would be an optimization intended to make the graphics system more convenient for experienced users. As such, we might consider it for Star 2 or Star 3 (but not Star 1).

I am quite impressed with JDS's effective use of the display. I have been trying to think of ways in which Star can use their techniques. Bill's suggestion seems like a promising start. It also suggests uses for "soft" keyboards in the text domain. Star has two (eventually many?) non-standard fonts: Greek and Special. How is the user to remember which Roman letter gives which symbol? Most Bravo users keep the font-mapping sheet from the Alto User's Handbook near by so they can refer to it. But that has always seemed like a kludge. There ought to be an on-line way to do it.

Applying the "soft" keyboard concept, Star could display, ala JDS, a mapping when the user switched to a non-standard font. The attached pictures illustrate this. The first picture shows the situation in which the user was editing a single 8.5x11" document when he switched to the Greek font. The second picture shows the situation in which the user enlarged (by some means) the document window before going to the special font. Bowman feels that this would be the most common graphics scenario because (a) a square working area is desirable, and (b) it cleans up the screen by suppressing the icons, making it easier to concentrate on the picture.

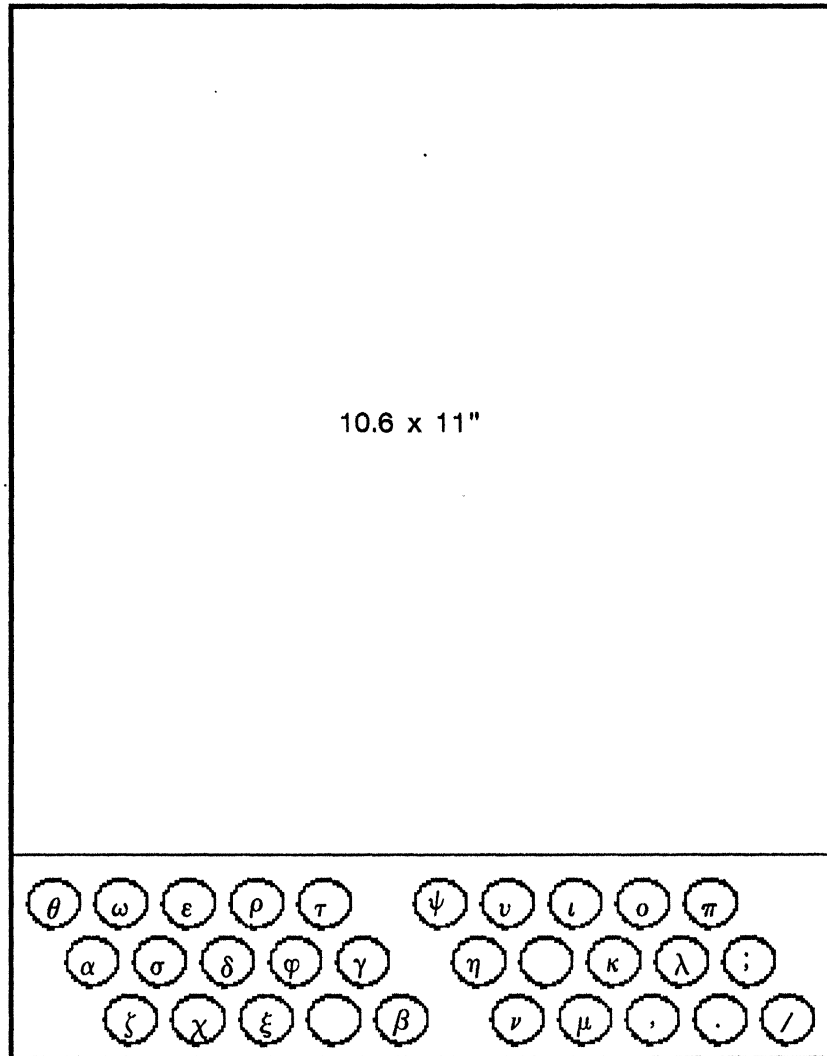
Note that only 30 keys are displayed: the 8 "home row" keys, plus the 2 index finger keys ("g" and "h"), plus the same 10 keys for the row above and the row below. The number keys and peripheral keys such as to the right of "p" are not included. I think it will be necessary to limit the number of keys displayed in order to keep it reasonably simple. JDS displays only 24 keys, leaving out the 6 "gh" keys.

If we do use a "soft" keyboard display, it should be at the bottom of the screen, as close to the physical keyboard as possible. This is difficult with a horizontally-oriented tube. It seems to work better (might I add: like a lot of other things) with a vertically-oriented tube.



Screen with an 8 1/2 x 11 inch "piece of paper", a "soft" keyboard display,  
and (up to) 16-20 icons.

10.6"



13.6"

Screen with the icons covered up (for simplicity) by an enlarged piece of paper  
(roughly 11 x 11 inches) and a "soft" keyboard display.