To: MTB Distribution

From: Paul W. Benjamin

Date: 04/15/81

Subject: Whither Docsys?

INTRODUCTION

Docsys (Document System) is described by its authors as "a means
whereby documents consisting of pictures, tables and related text
may be sketched, entered, stored, retrieved and edited on a Tektronix
4014 or 4081 Graphic Terminal for output to a microfilm device or
plotter device". It was developed by the IRM group of LISD as a
internal tool for engineers. It currently runs under GCOS3. I
am told that there is a Level/6 version as well, but information
on that is sketchy. It is basically a two-dimensional graphics
package that acts much like the MGS graphics editor with the major
exception that its input is centered around user positioning of
the graphic cursor as opposed to the entering of coordinates.
The user can set a point on the screen, move the cursor to another
position and have a vector drawn between the two points. One
utilization of this particular feature is the user's ability to
move the cursor short distances, having the "dots connected" as
she/he goes, and draw figures. Other cursor-positioning features
allow for the construction of arcs, circles, boxes, etc.,
duplication, rotation, shading or erasure of particular objects
and so on. In short, docsys is geared toward the individual with
little data processing or graphics knowledge who, for lack of a
better term, wants to draw pictures. Beyond that, it offers little
that would be considered innovative or useful to a Multics Graphics
user.

BACKGROUND

About a year ago, Bob Alvarado and Ed Wallman were involved in an
effort to get docsys running on System-M under the GCOS Time
Sharing Environment Simulator (gtss). That effort was successful
and, with subsequent modifications by Dave Ward, the package is
currently used by a Field Engineering group, with some level of
satisfaction.

TASK

To determine if docsys, or some version thereof, should find a
place for itself in, or along side of, the Multics Graphics System.

PROBLEMS

Docsys is written in Fortran and GMAP. While it exhibits user-friendly behavior, it seems rather un-Multics-like. In addition, there are many conventions that differ from those used by the graphics_editor. While a good portion of these differences are trivial (e.g. a long-dashed line type is indicated by the number 1 in docsys and by the number 4 in MGS), they would provide a great deal of confusion to a user who was attempting to use both docsys and the graphics_editor.

OTHER FACTORS

There has been discussion in the past of a straight conversion of docsys to native Multics and to have it ultimately produce permanent graphics segments that could in turn be accessed via MGS software. To conform to standards, interface cleanly with MGS and allow for reasonable support, such a conversion would involve recoding it in PL/I. If this was done, the current FED users would convert to the native version, and presumably be happier since there are some problems in the gtss version. If, however, a drastically different docsys-like package was developed, the FED group would suffer some problems in conversion.

CONCLUSIONS

Central to whatever decision is made on this is the issue of what is to become of docsys in general. If HIS was to offer docsys as a standard product that spanned product lines with versions on GCOS3, GCOS8, Level/6, CP-6, etc., then it would certainly behoove us to go with the flow and have a Multics version that was consistent. Once done, the Multics version would presumably be maintained by whoever maintained the others. My research has indicated, however, that there is no current plan to market docsys. There was the intention at one time to offer the GCOS3 version as an unsupported as-is sort of thing but that effort is now at a standstill, and there is no foreseeable change to its status.

Considering all of that, my proposal is that, if Marketing determines that the graphic input capabilities described above would be a useful and profitable item, then those capabilities should be incorporated into a new product that would retain docsys conventions where possible and reasonable to do so, and could be offered as a two-dimensional alternative to the graphics_editor (or alternatively a special mode inside the graphics_editor if that is determined feasible). In addition there should be a tool provided for the conversion of the existing docsys files. Such an effort would take approximately 12 man-months.