Subject: Major problem Cc: jeffl oemman ronh Date: Wed Jun 5 18:35:47 1991

we need to decide how we are going to address this issue, we are now significantly later than DRI and now much larger than 1) DRI and 2) what we have been telling our OEM customers this is really a poor development. richardf

>From tedha Wed Jun 5 12:51:17 1991

To: richardf

Subject: CBM, ROM DOS Size Problem Date: Wed Jun 05 12:45:35 PDT 1991

the water continues to get deeper ...

>From debbiefl Wed Jun 5 12:49:18 1991

To: sergiop tedha

Co: tomle Subject: FW: ROM DOS Size Problem

Date: Wed Jun 05 12:48:16 PDT 1991

commodore will find this very hard to swallow, especially when they are

so sold on dri's dos. their palmtop is only going to have 512K of rom

and 256k of ram, there in no place to tuck the extra overhead, the

residing in rom takes up very valuable space where they are going to stick their customized applets. however a schedule hit will put us n

an even worse position. how can i get some information together about

the possibilities of shrinking some files. dos will only be used to launch the applets and any rom card applications.

>From tedha Wed Jun 5 11:54:57 1991

To: tedteam

Subject: FW: ROM DOS Size Problem

Date: Wed Jun 05 11:48:23 PDT 1991

We must be just in front of a DOS Product launch...how can I tell?

this damn URGENT email about DOS.

This is a slightly different issue...memory requirements for ROM DOS:

Yes, you should talk to each of your accounts who have received the

 $5.0~{\rm ROM}$  spec and make sure they have no problems with this. If they do, you need to communicate to Sergiop immediately.

>From ronh Wed Jun 5 11:15:17 1991

To: doem ioem

Subject: ROM DOS Size Problem

Date: Wed Jun 5 11:13:01 1991

| | The following email is important. It alerts you to a big change | in the sixe of ROM DOS 5.0. Please read carefully if you are working

with

ORMs who want ROM DOS to address some specific memory size limitation or problem. We should start telling ORMs about this deviation from spec/product presentations now.

>From rayka Wed Jun 5 09:33:52 1991

To: jeffl richardf ronh

Cc: rayka sergiop

Subject: FW: Problem brewing in ROM Dos

Plaintiff's Exhibit

5286

Comes V. Microsoft

MS 5063119 CONFIDENTIAL Date: Wed Jun 05 08:32:43 PDT 1991

Yesterday, I met with DOS development/program/product management to

address this issue about the ROM-DOS 5.0 ROM size growing to 126K from

previously 70K. You may want to forward this email to your groups. Since this 126K size is in the 5/20 RCM-DOS 5.0 spec, we may need

position our size in a positive way to our OEMs. Although ROM-DOS 3.22 required 62K, it wasn't flexible and all of the 62K needed to be in between 640K and 1MB. With ROM-DOS 5.0, we bring more flexibility to the ROM layout. 45K kernel runtime is resident

and needs to between 640K and 1MB while the remaining 81K transient

command.com and system initialization code has no location restrictions. According to DOS Program Management, this was done to give much more flexibility to the laptop PCs. Their plans are to solve some of the size problem as outline below. If the below solution doesn't solve our OEM's concerns, then we should let the DOS Group know ASAP. They can not shrink ROM-DOS 5.0 without a

major schedule hit. Using a skeletal COMMAND.COM shrinks the RCM requirements for a system that only need to launch applications such as a handheld terminals. Most systems may still require the full COMMAND.COM.

Sergio will putting together more positioning info about this size issue after we get more info about DR-DOS.

>From tomle Tue Jun 4 18:45:47 1991

To: adriank brade davidols eriest mikedr rayka sergiop

c: fernandd tomle

Subject: Problem brewing in ROM Dos

Date: Tue Jun 04 18:45:42 PDT 1991

We have a problem brewing in ROM DOS. We initially gave an estimate of 70K for the DOS 5 ROM Requirements. Since then, the numbers have grown, a lot, to 120K for the full Caddy version. We have failed to inform OEM and they have been merrily spreading the word about 70K To make matters worse DR is claiming some small number. Numbers between 64K and 96K have been tossed about. This would appear bad for us. First, we're going to have to go back to OEMs and let them know the news and in DR Battles we appear to be badly positioned.

We can make this situation better. Two of the biggest chunks of memory are taken up by Command Transient and Bios Sysinit. Back when we were laying out this product we decided to optimize towards laptops and shipping as early as we could. This decision was probably not that clever in light of the problem RayKa now finds

himself in. It will be hard to go to someone like the makers of the HP 95LX and convince them that they are getting a lot of benefit for

the extra memory overhead. What we can do is create a mini-command and document how to build a sysinit-free RCM image. This will get the overall RCM requirement down.

Command Transient = 48K Sysinit = 25K

Understanding DR's package is very important. The ROM builder kit

code in it so I don't believe anyone in program managment or development | can look at it. SergioP will be trying to arrange a consultant who will | be very familiar with the DR-Dos ROM environment so that we can ask

specific questions in a safe environment.

Tom

MS 5063120 CONFIDENTIAL