#57   Calculating the Usable Screen Area

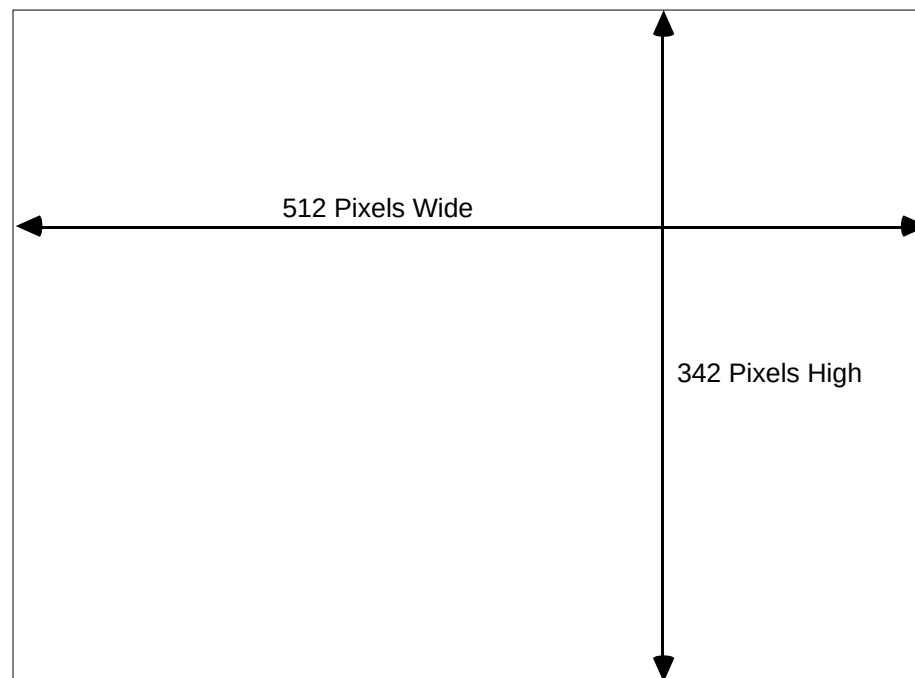Written by Lance McAndrew   Date Published February, 1988

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How to know exactly where the screen boundaries are.

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Often when developing an application, layout screens tend to get crowded, a lot of time is spent switching environments to see that all of layout fits on the screen. Here are some guidelines for calculating exactly where the screen boundaries are in your layouts. We'll use a Macintosh Plus screen as an example.

By using 4th Dimension's commands **Screen height** and **Screen width**, the developer is able to read the Macintosh's Low Memory Global Variables where the current screen dimensions are stored.

In your Macintosh Users guide, (or the guide that comes with your specific monitor) the screen size is given. For the Mac Plus the screen is 512 by 342 pixels.
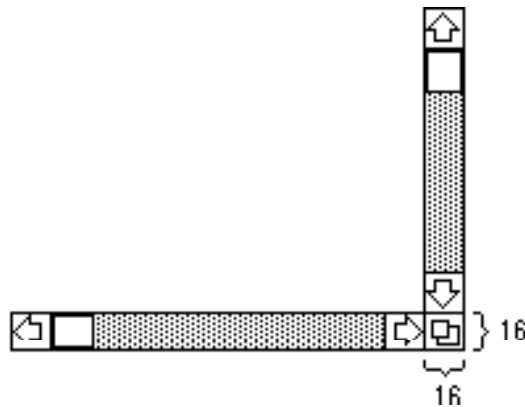
512 Pixels Wide

342 Pixels High

The Menu Bar takes up 20 pixels on the top, so that leaves us with 322 pixels in height.
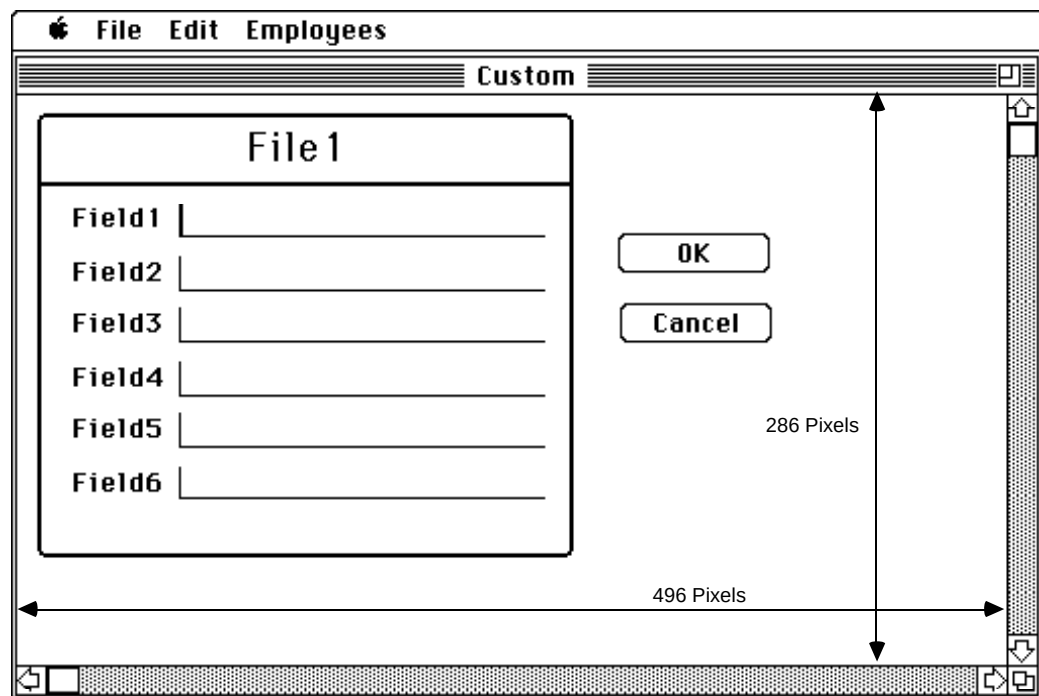
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The Title Bar of the window takes up an addition 20 pixels, so that leaves us with 302 pixels in height.

Scroll bars are 16 pixels wide, so that leaves us 286 pixels in height and 496 pixels in width.

So our final, effective screen size is 286 by 496

If your layout does not contain scroll bars, (ie dialogs or input layouts with the * parameter on ADD

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RECORD,) the scroll bar calculation can be ignored.

If you are using a non-Roman Script System, (ie Japanese or Arabic) the Menu Bar and Title Bar values differ. The size varies due to the different system font used. The Menu bar size can be determined using Macsbug by reading a low memory variable at location $0BAA. The Title bar size is stored at $0BA8. The scroll bar size does not change.

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Summary

Item Sizes

Item	Pixels
Menu Bar	20
Title Bar	20
Scroll Bars	16
Japanese Menu Bar	21
Japanese Title Bar	21
Scroll Bars	16

Screen Sizes

Screen	Height	Width
Mac Plus	512	342
Mac II Monochrome	480	640
Mac II Color	480	640
Radius FDP	864	640

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