

Q: It seems like the `scrollView` ignores the `frame.origin` of its `docView`. Also, does a `ScrollView` clip to its update `rect(s)`?

A: A `ScrollView` translates the coordinate system of its `contentView` in response to user movement of the scrollers. Since the frame of the `docView` is defined in the coordinate system of the `contentView` (i.e. it's a subview of the `contentView`), translating the coordinate system of the `contentView` has the effect of moving the frame, and hence the visible portion of the `docView`.

When you do a **`setDocView`**: the system translates the coordinate system of the `contentView` so that the `contentView`'s `bounds.origin` is the same as the `frame.origin` of the `docView`. For example: if the `frame.origin` of your `docView` is `{100.0,100.0}`, the `bounds.origin` of the `contentView` will be `{100.0,100.0}` as well.

So the `ScrollView` does pay attention to what the `frame.origin` of the `docView` is, but it doesn't really matter what it is, at least initially.

User code really shouldn't make changes to the frame of the `docView` as it is being

managed by its superview (a ClipView). To achieve scrolling use the - **rawScroll:** method.

No, the drawing is not clipped to the update rects; however, you can restrict the area being redrawn yourself by using **PSrectclip()** or **NXRectClip()** in your **drawSelf:** method.

QA160

Valid for 1.0, 2.0, 3.0