FactoryTalk View Machine Edition Images Best Practices

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Question

What is the FactoryTalk View Machine Edition Best Practices for handling Images?

Answer

For additional information on Best Practices can be found at:
36745 - FactoryTalkView Machine Edition Best Practices TOC (//rockwellautomation.custhelp.com/app/answers/detail/a_id/36745)

PanelView Plus 6 and PanelView Plus 7 design considerations for Image use:

- Use PNG images in order to significantly reduce the size of images.
- Use the following practices in order to obtain the best performance when loading and displaying the image:
  - Convert the image to a 24 bit PNG.
  - Reduce the height and width of the image to match the height and width of the object it is being applied to - if the image is being applied to a 100H x 100W button, reduce the height and width of the image to match before adding the image to the Images library.
- When converting the image to a 24 bit PNG, use the Save As option in the conversion utility. This option provides the ability to select whether the background of the image is transparent or not.
  - If given the option to select a compression level, use a compression level that reduces the size of the image to the smallest value which still provides a good quality image - for example use a compression level of 5 or 6.
  - Also, select if the background of the image is to use transparency
  - An available freeware conversion program is called IrfanView - http://www.irfanview.com/ (http://www.irfanview.com/)

The following information applies to PanelView Plus terminals.

Images Jpegs VS Bitmaps

Images (Design Time)

- Unused bitmaps will be built-into the project .mer file
  - Internal storage memory within the terminal will be consumed as a result

Images (Runtime)

- Bitmaps are expanded into temp RAM during runtime

    - When an image display is opened then the image is cached into RAM again

- Images are cached and released once you leave the display
- During runtime any image will be converted to a bitmap

    - Jpegs will be converted to a bitmap type

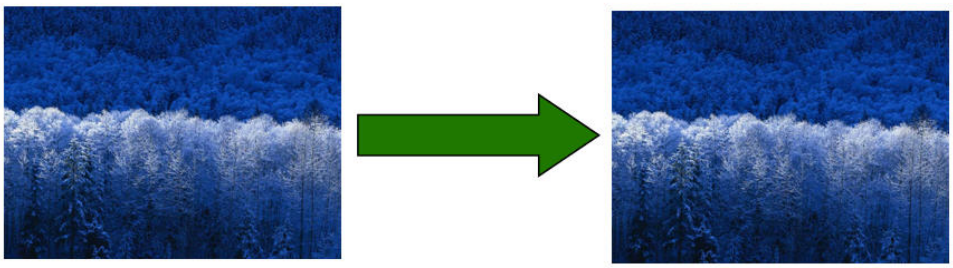
- Large images may cause slow display performance due to load time

    - Unit may also run out of available RAM
    - Additional RAM will help with caching images

Jpegs

- RAM usage for jpegs is unknown until the picture is converted to a bitmap
- Jpegs load faster than bitmaps
- Runtime file size of the jpeg should be known to calculate actual memory usage
- Max resolution (dot/inch) for what image that can be possibly displayed
- Use jpegs in application but understand what the real file size is during runtime

Image Conversion Example



Jpeg **Bitmap**

Best Practices for Optimizing Performance & Memory

- Remove unused bitmaps
- Use jpegs in applications but understand what the real file size is during runtime
- It's a comprise between making the application look good and running fast
- Cycle through all displays once to determine any performance impacts

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