Resize Photo

# Overview:

The photos taken on Windows Phone are usually HD photos. Thus the file size is very large. This makes the application slow (loading large photos). In addition, uploading large files takes longer time, and requires more bandwidth cost.

In most cases, users do not need to create HD videos. The phone screen size is not suitable for HD videos any way. So we need to use smaller images whenever possible.

# Goals:

* Display only thumbnails in the compose page and the choose media component.
* Resize the photos in the preview page.
* Allow the user to select the target resolution (optional).

# None Goals:

* Resize videos.

# Design:

XNA’s MediaLibrary.Pictures contains a method GetThumbnail. This returns a low resolution thumbnail of the photo, which is significantly faster than GetImage. The thumbnail should be enough to serve the choose media component and the compose page. But for preview page, we need to use a higher resolution photo.

Let’s use GetThumbnail in the choose photo component. After the component is closed, all unused thumbnail streams should be closed. All selected thumbnail streams must remain in memory, and serve the compose page.

In the compose page, the user can remove photos. We need to close the corresponding thumbnail streams as well.

When the user enters the preview page, we query the original photos for all chosen photos, and use WriteableBitmap to resize them. To reduce response time, we resize an image when it is to be played. An alternative design would be resize all images when navigating to the preview page, and create a loading animation indicating the preview is being prepared.

The resized images can remain in memory. So we don’t need to regenerate them if the user chooses to preview again. But when the user removes an image, the corresponding generated image stream must also be closed.

## Query the original image

The XNA media library uses the Name property to uniquely identify an image. So our model and view model should also contain this property.

## Resize the image

The Windows Phone version of WriteableBitmap ships with a handy SaveJpeg method, which allows us to resize the image. We’ll take advantage of this method instead of writing a custom algorithm.