# NVIDIA Embedded Graphics

# Programming task “Image Processing”

Our suggested programming task for NVIDIA Embedded graphics is to write a standalone image processing application in C or C++

Problem Statement

Write an image processing application, which scales an input image to any scale using bilinear interpolation algorithm.

* **Input**

1. Image: Example input.png
2. Scaling Parameter (integer value)
   1. SX : Scale in X Direction
   2. SY : Scale in Y Direction

* **Output**: Output Image: Example output.png
* **Example Command**: scaledImage input.png 100 100 output.png

Expectations:

The focus should be on quality, documentation and performance. We are hoping that an application can be completed in 2-3 days.

Requirements:

* Write scaling function yourself, don’t use 3rd party library to scale the image. Use trilinear filtering in your assignment.
* Your program should be multi-threaded, to utilize the underlying hardware capability.
* You can use third-party library to load and save image data

Please send back:

1. The source code and build system files (if any).
2. The executable with a few instructions on how to build/run it.