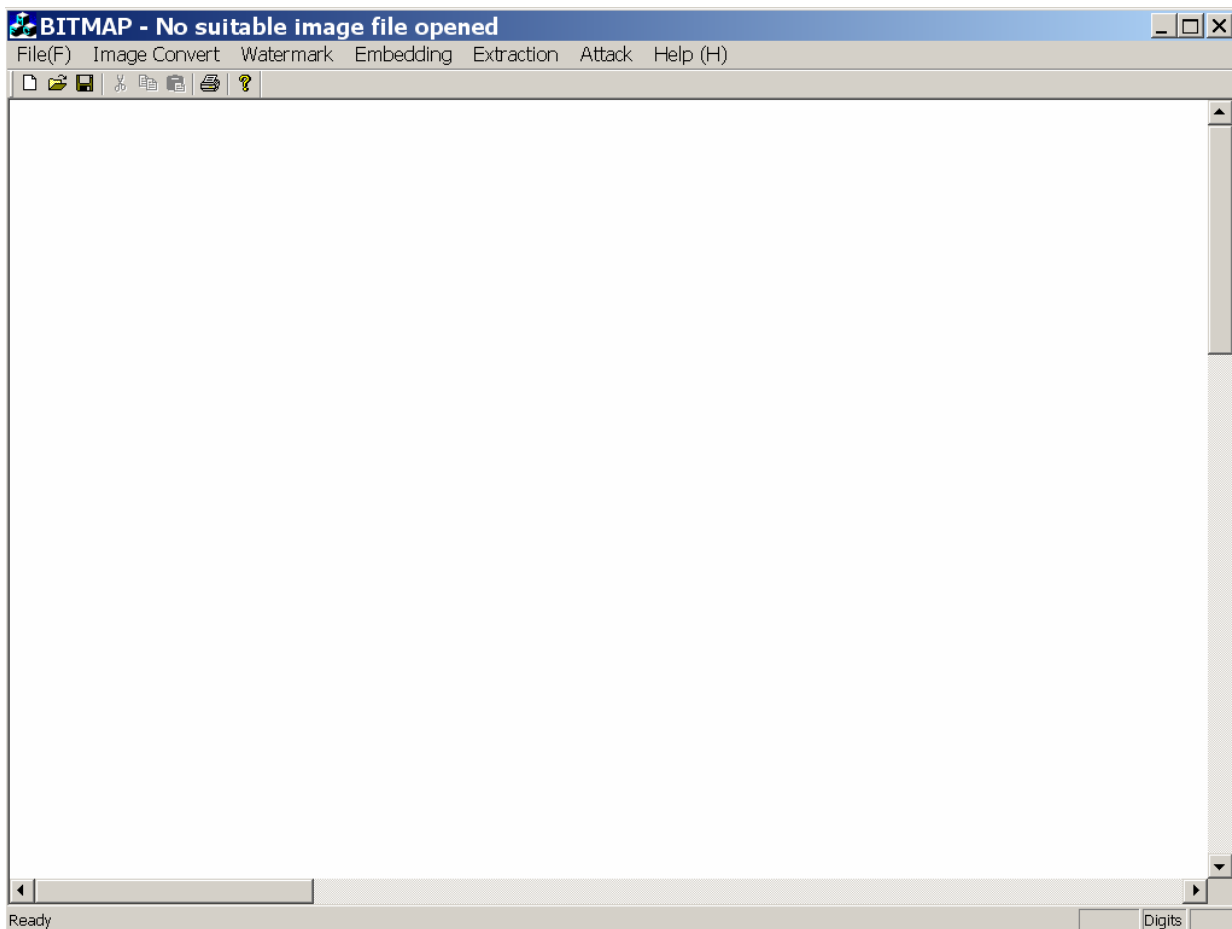


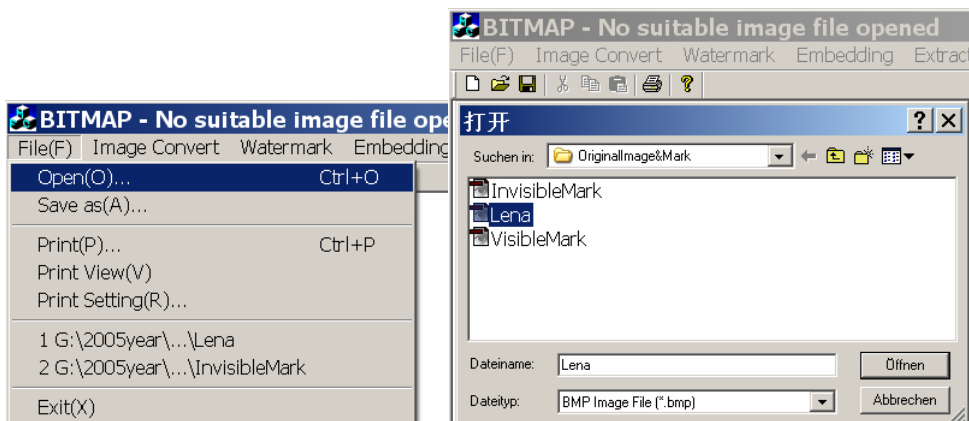
# How to use the bitmap.exe

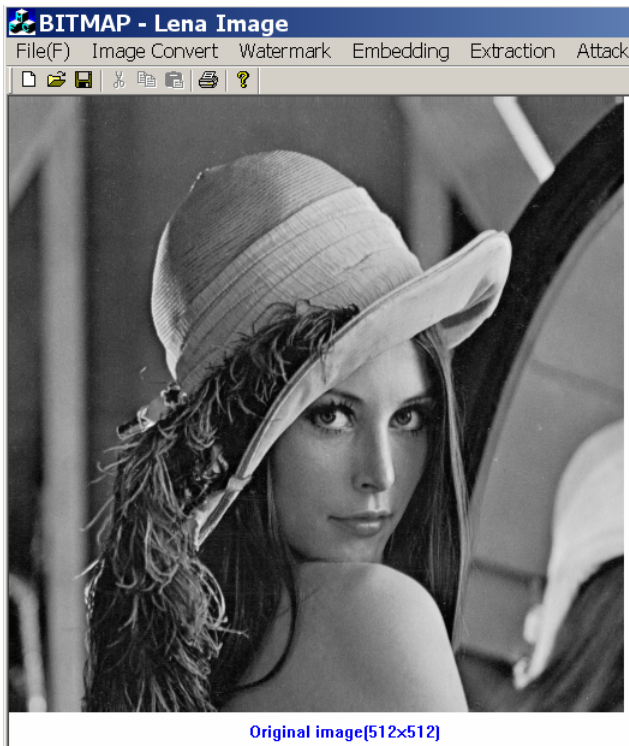
**Note: This software can be also used for color image watermarking. Following description is for Grayscale image watermarking**

1. The initial interface is as follows



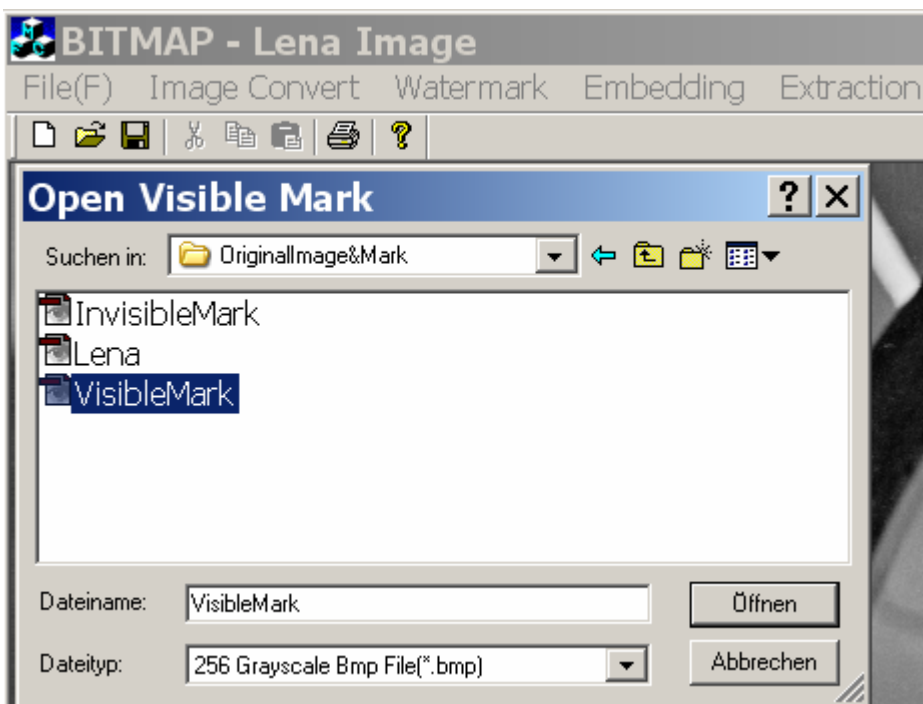
2. Open Original Image to be watermarked





3. Open the original two watermarks

3.1 Open the original visible watermark





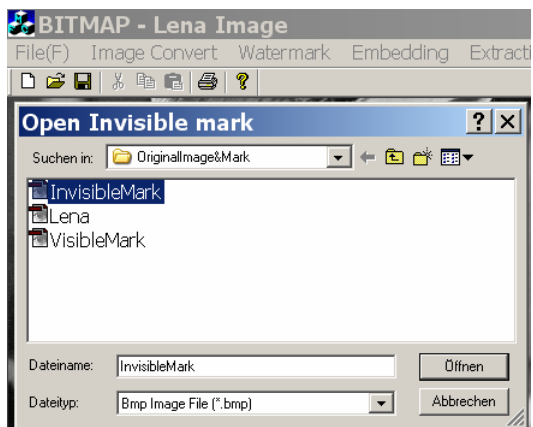
Original image[512x512]



Visible Mark[512x512]

3.2 Open the original invisible watermark





Original image[512x512]



Visible Mark[512x512]

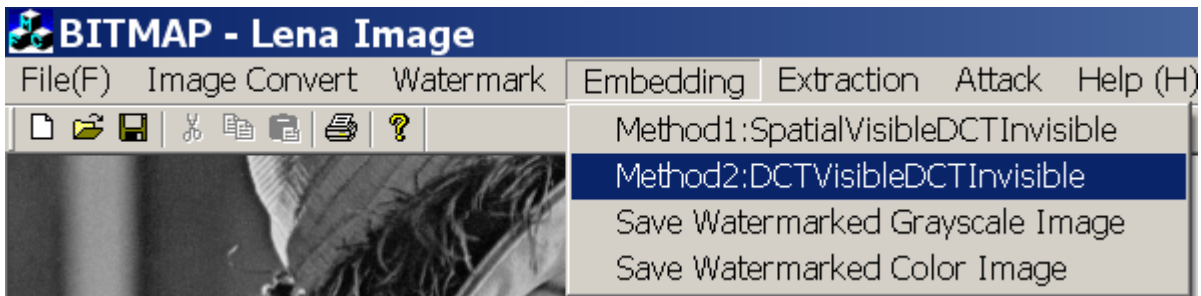


Invisible Mark[64x64]

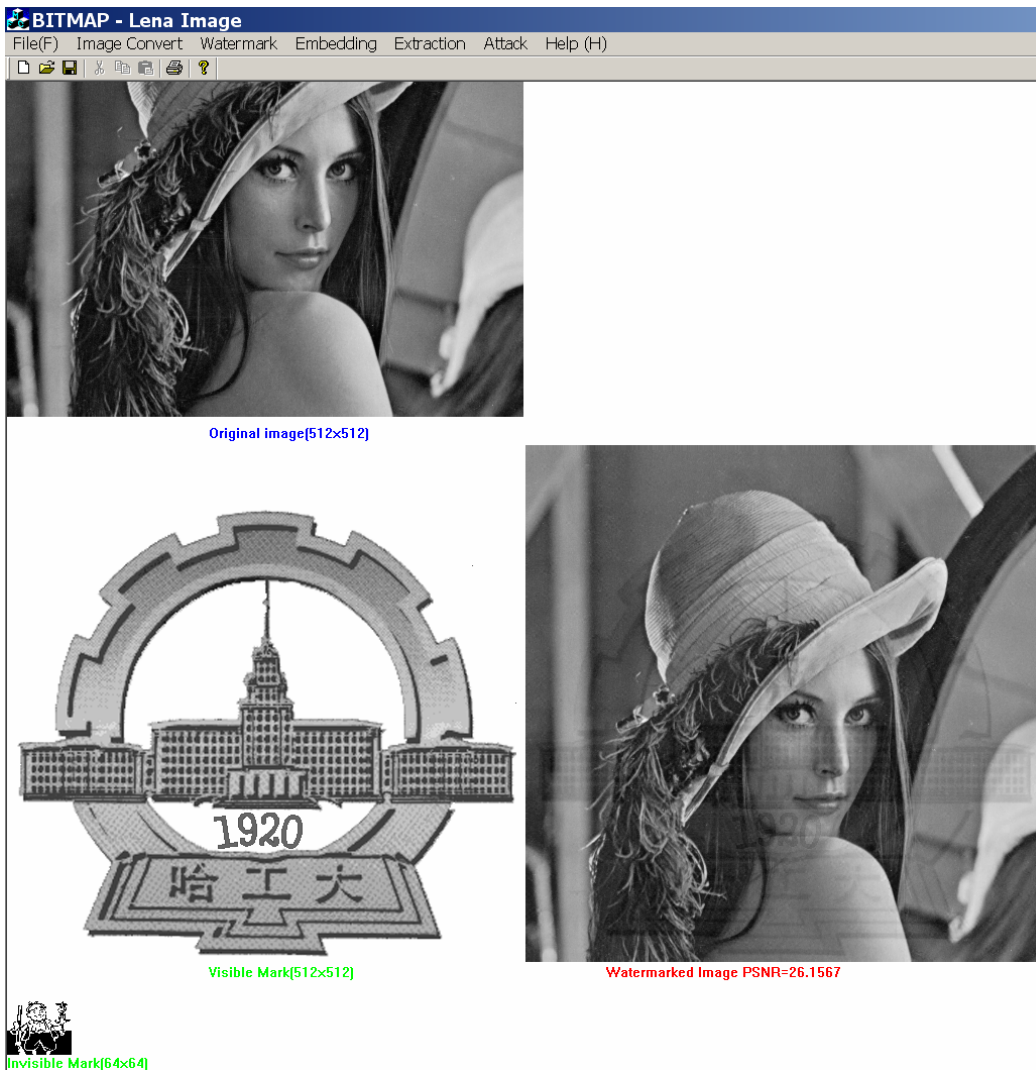
After opening original marks, we can save original marks as other filenames.

#### 4. Embed

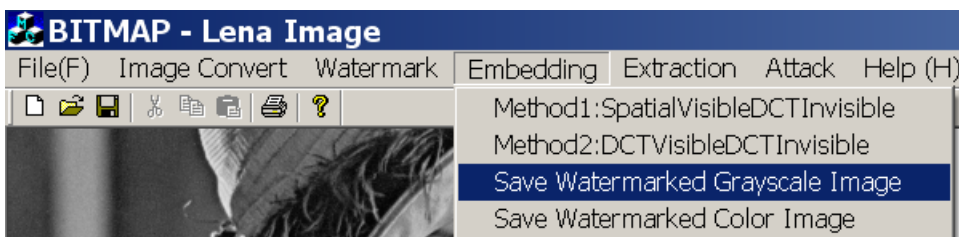
Select method to start embedding. Method 1 or Method 2. Method 2 is for the book chapter

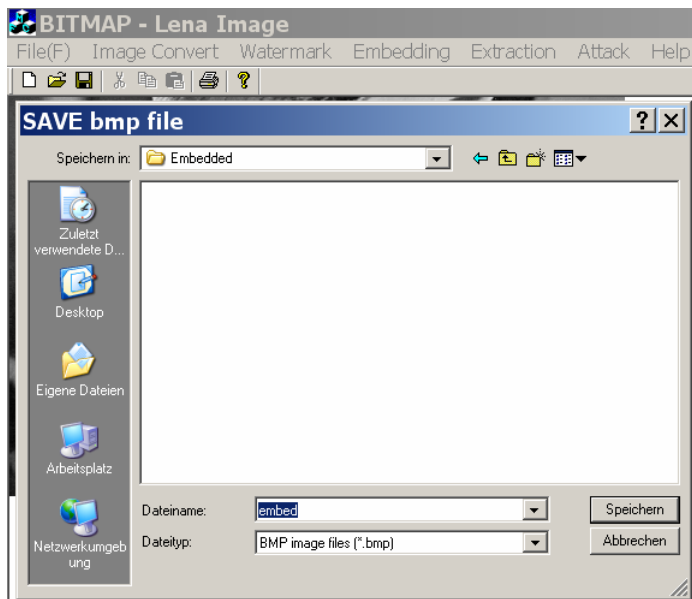


Wait some time, maybe one to ten minutes(based on the computers' speed)

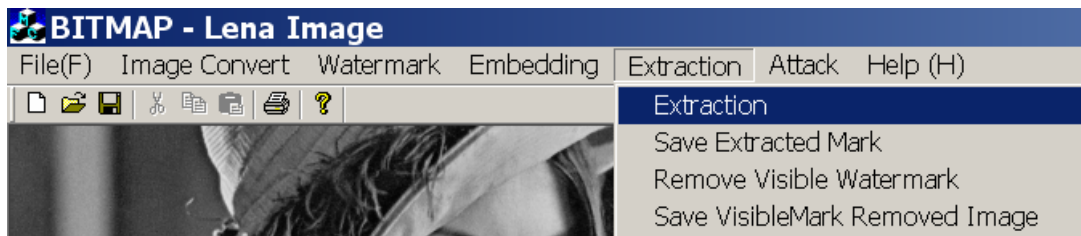


Then we can save the watermarked image





## 5. Extraction without attacks

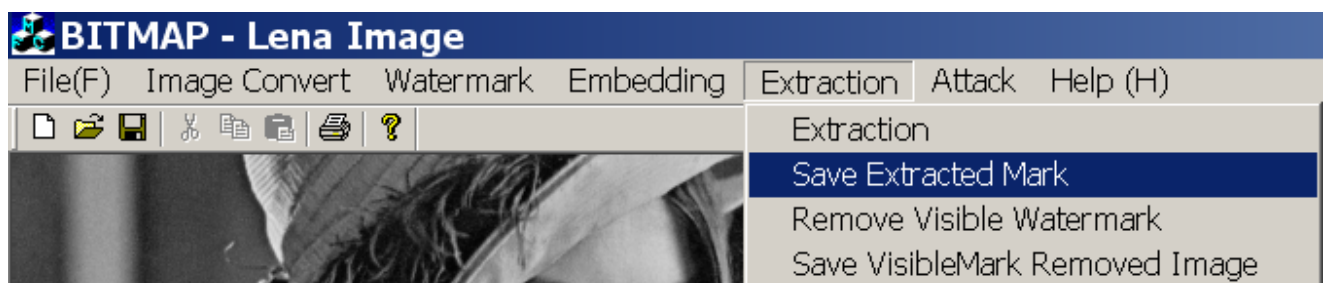


Wait some time, maybe one to ten minutes(based on the computers' speed)





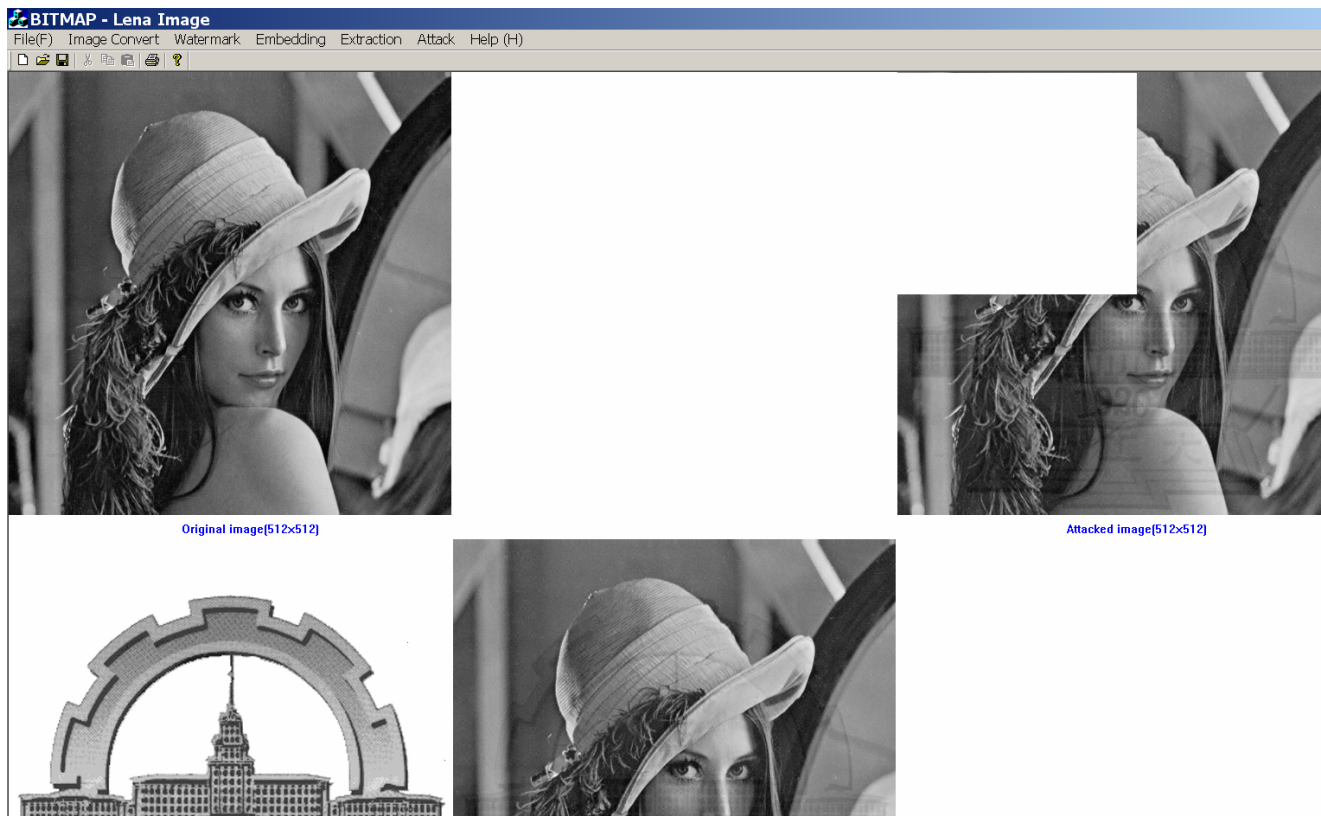
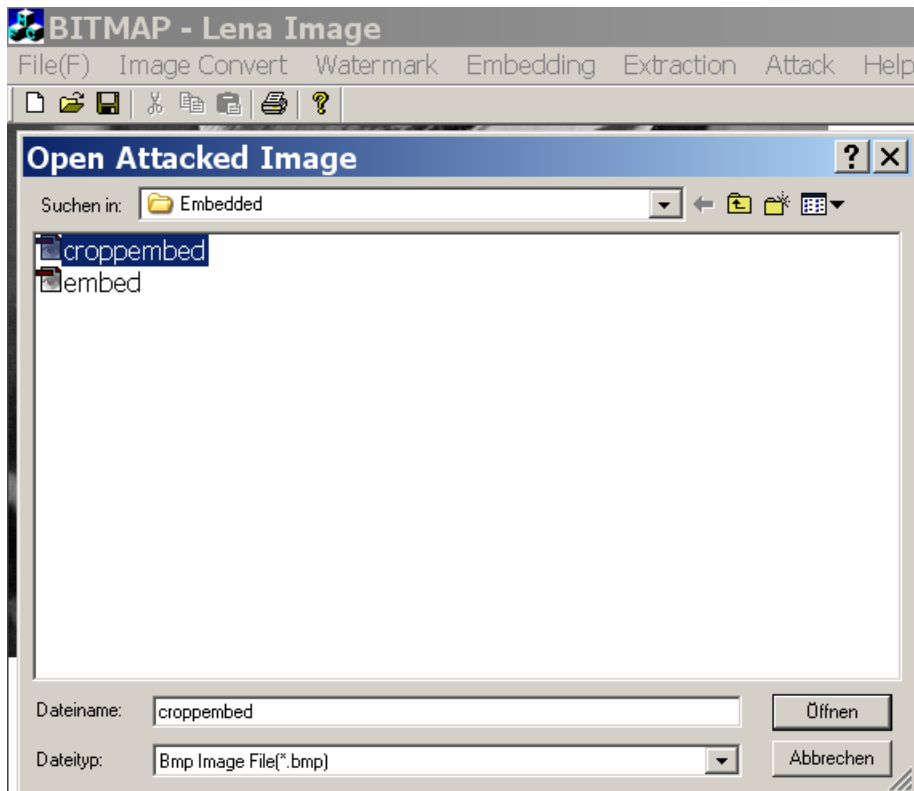
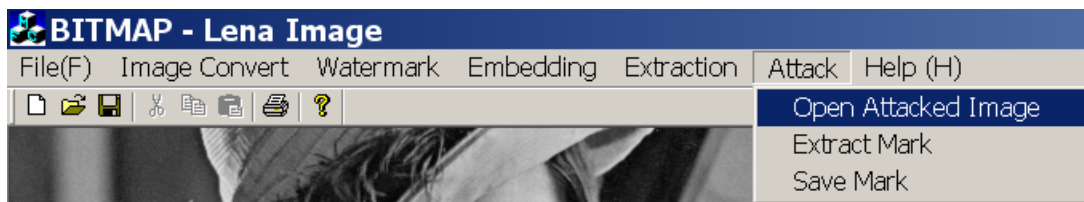
Then we can save the extracted invisible watermark



## 6. Extraction with Attacks

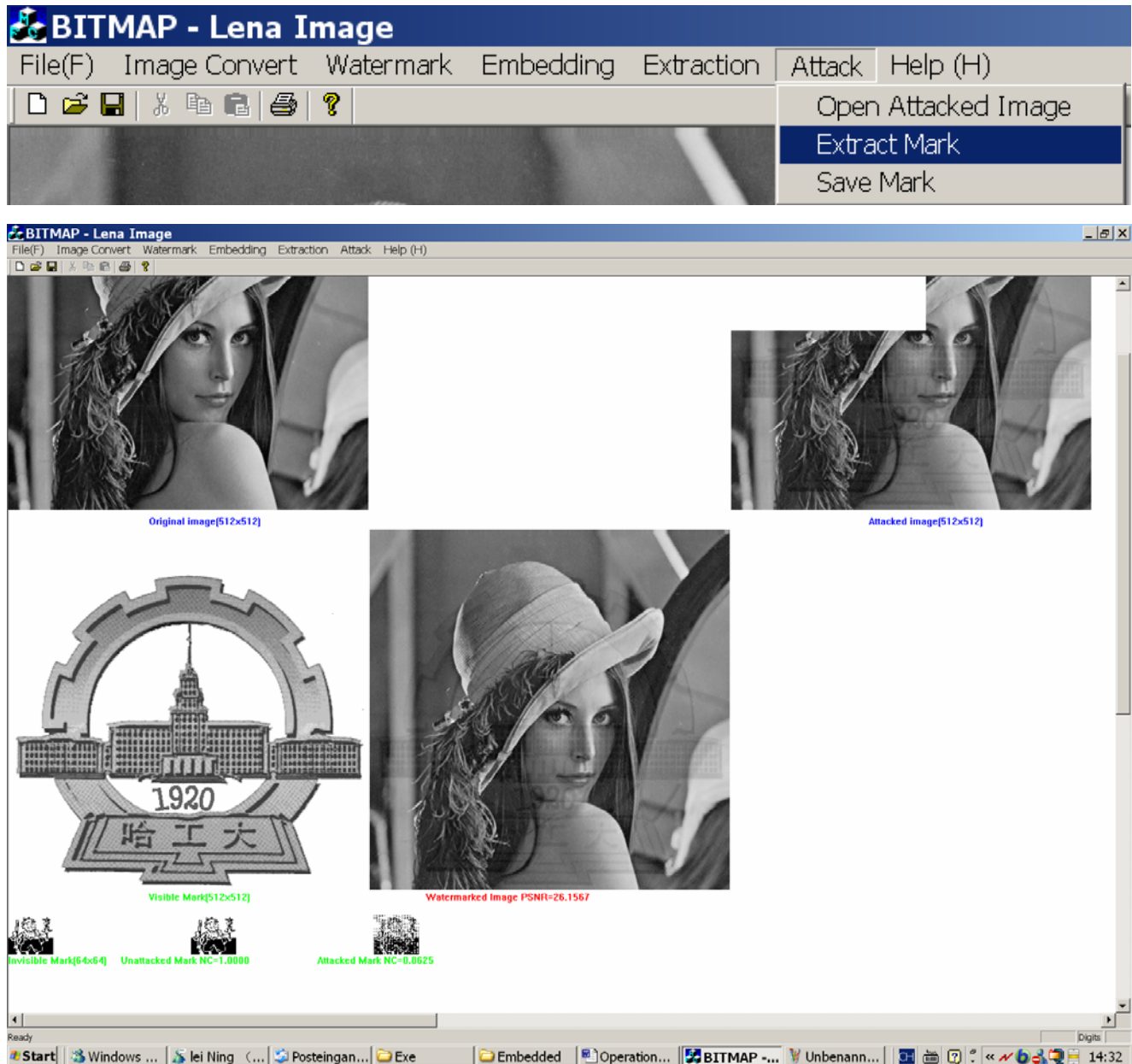
Assume the watermarked image has been attacked by image cropping

6.1 Then we can open this attacked image





## 6.2 Extraction



Then we can save the extracted mark

